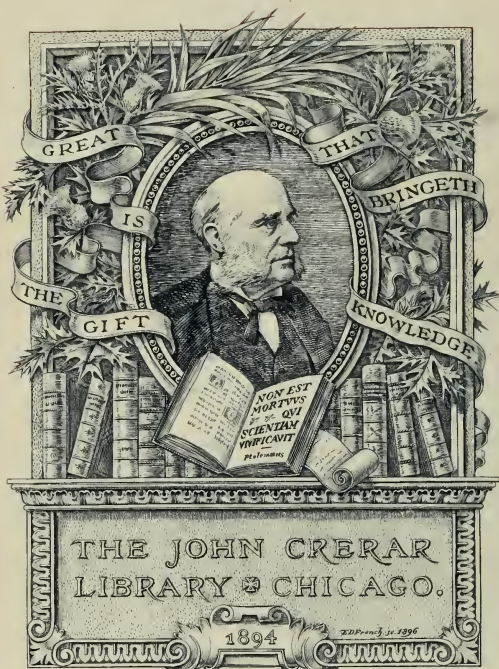




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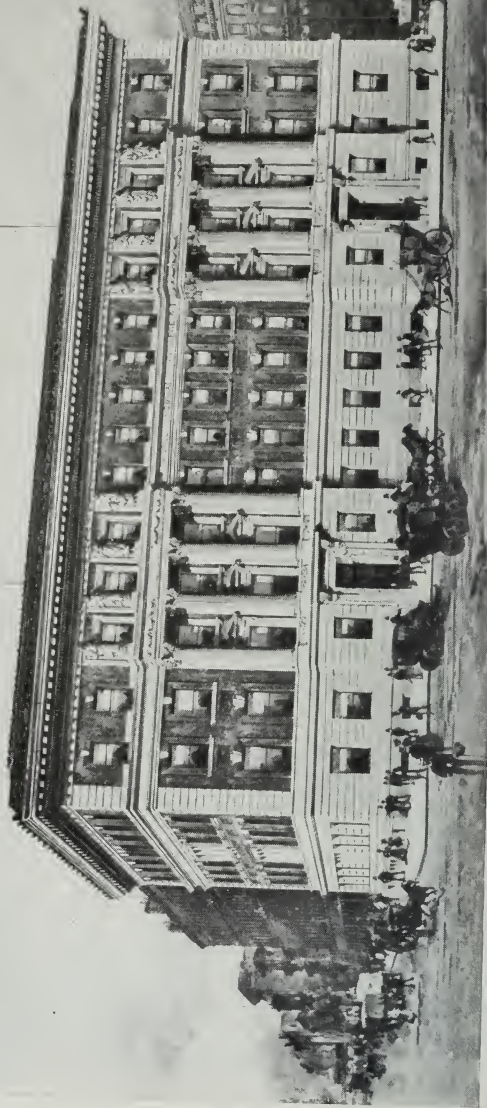
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CALENDAR.

1907.

Sept. 16, Monday—Examinations begin for admission to the first year of all departments of the University.

Sept. 23, Monday—Examinations begin for conditioned students and for those applying for advanced standing in the medical department.

Sept. 25, Wednesday—College opens.

Nov. 5, Tuesday—Election day. Legal holiday.

Nov. 28, Thursday—Thanksgiving recess begins.

Dec. 2, Monday, 9 A.M.—Thanksgiving recess ends.

Dec. 23, Monday—Christmas recess begins.

1908.

Jan. 3, Friday, 9 A.M.—Christmas recess ends.

Jan. 3, Friday }
Jan. 4, Saturday } Mid-winter Examinations.

Feb. 22, Saturday—Legal holiday.

April 17, Friday—Easter recess begins.

April 20, Monday, 9 A.M.—Easter recess ends.

May 11, Monday—Examinations begin.

June 10, Wednesday—Commencement.

All students must be registered at the secretary's office at the opening of the session. No student will be admitted after October 7th without special permission of the faculty. Immediately after registration the fees must be paid at the treasurer's office.

Men may take the first two years in either New York or Ithaca. Women must take the first two years at Ithaca. All students take the last two years in New York.

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Resolved, That for the purpose of making recommendations to the Board of Trustees or the Executive Committee in relation to the business management of the Medical College there be established, and there is hereby established, a Medical College Council which shall consist of seven members, to wit: the President of the University (who shall be *ex-officio* chairman), the Director of the Medical College, and three trustees to be elected by the Board of Trustees or the Executive Committee who shall be appointed, one for one year, one for two years, and one for three years, and their successors be appointed for three years, and two members of the Faculty, to be elected by the Faculty, who shall be appointed, one for one year, and one for two years, and their successors to be appointed for two years, and that all appointments to fill vacancies be made for unexpired terms.

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SWEPSON J. BROOKS, M.D.	

Department of Psychopathology.

Chief of Staff.

AUGUST HOCH, M.D.

Assistant Physician.

G. H. KIRBY, M.D.

Department of Pediatrics.

Physicians.

WALTER A. DUNCKEL, M.D.,	WILLIAM SHANNON, M.D.
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Assistant Physicians.

GEORGE DOW SCOTT, M.D.,	BENJAMIN H. SEARING, M.D.,
WALTER W. ROSE, M.D.,	ALBERT BECKARY, M.D.,
H. P. MACGREGOR, M.D.	

Department of Dermatology.

Chief of Staff.

JAMES C. JOHNSTON, M.D.

Surgeon.

HANS J. SCHWARTZ, M.D.

Assistant Surgeon.

DARWIN W. WAUGH, M.D.

Department of Otology.

Chief of Staff.

GEORGE B. MCAULIFFE, M.D.

Assistant Surgeons.

NATHAN S. ROBERTS, M.D.,	H. E. COOK, M.D.,
C. M. HICKEY, M.D.	

FACULTY OF MEDICINE.

Department of Laryngology.

Chief of Staff.

JAMES E. NEWCOMB, M.D.

Assistant Surgeons.

FRANKLIN T. BURKE, M.D.,

WALTER C. MONTGOMERY, M.D.,

CHARLES MACK, M.D.,

PERRY SCHOONMAKER, M.D.

Department of Orthopædics.

Surgeons.

P. HENRY FITZHUGH, M.D.,

JOHN J. NUTT, M.D.

Assistant Surgeons.

DEAS MURPHY, M.D.,

J. HERBERT CLAIBORNE, M.D.

Department of Ophthalmology.

Surgeons.

ROBERT G. REESE, M.D.,

J. HERBERT CLAIBORNE, M.D.

Assistant Surgeons.

G. W. VANDERGRIFF, M.D.,

EDWARD B. COBURN, M.D.,

J. R. HICKS, M.D.

Department of Radiography and Radiotherapy.

ALBERT C. GEYSER, M.D.

Department of Drugs and Supplies.

Apothecary.

GUSTAVE T. RUCKERT, Ph.G.

Assistant Apothecary.

JOHN B. HEUSER, Ph.G.

J. THORN WILLSON,
Managing Clerk of the College,
477 First Avenue.

WALTER R. SHEPHERD,

Bookkeeper.

GENERAL STATEMENT.

The Medical Department of Cornell University was established in 1898. This undertaking, which had been contemplated by the Trustees for several years, was made possible by the gift to the University of a commodious and fully equipped building designed for medical instruction, and by the bestowal of a sufficient "Endowment Fund" for the generous maintenance of a large and vigorous school for higher education in medicine.

The Main College Building comprises a Medical School and Dispensary, with principal entrance on First Avenue, opposite Bellevue Hospital, and occupies the entire block between Twenty-seventh and Twenty-eighth Streets on First Avenue, extending back 100 feet, thus affording an available space of nearly 20,000 feet on each floor. The building is designed in a severe style of Renaissance architecture, and is constructed of Indiana limestone and red brick. See page 139.

The Loomis Laboratory (founded 1886) serves the purpose of undergraduate instruction, in connection with the laboratories in the College building. It has also been reorganized as a research laboratory, and special departments have been established in bacteriology, physiological chemistry, experimental medicine, and pharmacology. Facilities are thus furnished to graduates in medicine who may desire to pursue further study or original research in the various departments of laboratory investigation.

The Metropolitan Street Railroad cars on Twenty-eighth and Twenty-ninth Streets and First Avenue connect with all the other lines of the company, by a system of transfers at Fourteenth, Twenty-third, Thirty-fourth, and Fifty-ninth Streets, and so put all the hospitals in the city within easy access of the College. A convenient station of the Manhattan Elevated Railroad is also at Twenty-eighth Street and Third Avenue. A station of the Subway is at Twenty-eighth Street and Fourth Avenue.



THE LOOMIS LABORATORY

CLINICAL FACILITIES.

The College Dispensary.—One-half of the College building is allotted to the Dispensary, in which ample provision has been made for the accommodation of the various clinical departments, of which there are thirteen, viz.: General Surgery, General Medicine, including the Diseases of the Heart and Lungs, Gynæcology, Diseases of Children, of the Nervous System, of the Genito-Urinary System, of the Skin, Eye, Ear, Nose and Throat, Orthopædic Surgery, Radiography, and Psychopathology.

Each department has been furnished with all the instruments and apparatus necessary for the examination and treatment of patients. A number of small amphitheatres are placed in the Dispensary, so that the clinical instruction provided by the curriculum can be carried on without interfering with the treatment of patients.

The attendance in the Dispensary averages about 500 patients daily, so that the clinical material is abundant and accessible.

Members of the Faculty of Cornell Medical College hold appointments in the hospitals and dispensaries of the city, and are thus enabled to utilize for teaching purposes a great quantity and variety of clinical material. The most important and best of these hospitals are the Bellevue, New York, Presbyterian, German, St. Vincent, Gouverneur, Hudson Street, Willard Parker and Reception Hospitals, and the New York Eye and Ear Infirmary. Others are utilized from time to time, as necessity or opportunity arises. The major part of the bedside and clinical instruction is, however, conducted in Bellevue Hospital, which is directly opposite the College.

This hospital has 900 beds, and receives 24,000 patients annually. It contains an amphitheatre capable of seating 300 students, and also a number of small, newly built operating theatres, where section demonstrations in surgery and gynæcology are made before the class. Connected with the hospital is a hydropathic establishment, where students are shown the practical applications of baths, douches, massage, etc.

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The following clinics are held during the session:

Gynæcology—Monday, 3 P.M.

Professor POLK.

Medicine—Tuesday and Friday, 3 P.M.

Professors LOOMIS and THOMPSON.

Surgery—Wednesday and Thursday, 3 P.M.

Professors STIMSON, WOOLSEY, DENNIS, and GWYER.

Genito-Urinary—Wednesday, 3 P.M., for the latter half of the term.

Professor ALEXANDER.

Nervous Diseases—Friday, 4 P.M.

Professor DANA.

REQUIREMENTS FOR ADMISSION.

The laws of New York State require of the prospective student of medicine a preliminary education equivalent to that obtainable in a four years' course in any academy or high school recognized by the Education Department as maintaining a satisfactory standard, before the applicant can be admitted to any class in any medical college in the State. A list of the subjects ordinarily taught in these schools is given in Handbook No. 3 published by the Education Department, and mailed on application to this department, Albany, New York. In this it will be found that each subject, according to its character and the time usually devoted to it, is assigned one or more "counts," 60 of which are needed to obtain the medical-student certificate. This official approval of the preliminary education may be granted by the Regents on presentation to them of properly attested evidence that the requisite work was accomplished in a registered institution. In lieu of this the applicant is required to pass the examinations conducted by the State authorities at regular intervals throughout the year.

As the ordinary 60 count "Medical-Student Certificate" required by law can be obtained with little or no knowledge of the English language, and of subjects which are absolutely essential to a proper understanding of any natural science, all applicants for admission must earn their medical-student certificate in part upon the following subjects, as described in "Handbook No. 3, Education Department, Examinations, 1905-10."

Algebra, 5 counts; Plane Geometry, 5 counts; Third-Year English,

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or its equivalent, 10 counts; Second-Year Latin, or the first four books of Cæsar's "Commentaries," 10 counts, or First-Year Latin 5 counts, and First-Year German, French, or Spanish, 5 counts. Total, 30 counts.

The subject-matter covered in these requirements, which must be included in the Regents' certificate, is briefly summarized as follows:

Algebra includes the elements of the subject through quadratic equations.

Plane Geometry includes the geometry of the plane, the ordinary definitions, and demonstrations of simple original theorems.

Three years of English comprise (1) reading and composition, including the theory of construction in prose; (2) terms of style, figures of speech, and prosody; (3) the uniform college entrance requirements for reading and prose (see p. 24).

Two years of Latin include a knowledge of grammar and the ability to translate at sight simple passages from any standard author, or from the first four books of Cæsar's "Commentaries." The alternative to Second-Year Latin, namely, First-Year Latin with First-Year German, French, or Spanish, comprises under the heading, First-Year Latin, a knowledge of grammar, the rendering of simple prose from Latin into English, and *vice versa*. Under the heading of First-Year German, French, or Spanish, a similar knowledge is required.

The total number of counts allowed by the Regents for these required subjects aggregate 30. The Faculty recommends that the remaining 30 counts necessary to complete the certificate be made up from the following subject-groups enumerated in Handbook No. 3 of the Education Department of the State of New York: Science; Mathematics; Language and Literature; History and Social Science.

Students who can earn a portion of these 30 counts upon Physics (5 counts) and Inorganic Chemistry (5 counts), as is earnestly recommended, may be given credit for them, and the time thus gained will be devoted to intensive work in the medical branches.

A certificate of the College Entrance Examination Board, or Cornell University Entrance Examination, covering any of the above subjects, provided at least Grade C (60) is obtained, may be exchanged for corresponding Regents' Examinations.

Attention is called to the fact that applicants who have successfully completed the first year in any college or university recognized by the Education Department as maintaining a proper standard will be considered as having had the requisite preliminary education, and will be

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admitted without further formality to the first year of the medical course, provided they first present their diplomas or certificates of education to the State authorities, and thus obtain the ordinary medical student's certificate.

Applicants who have not obtained the requisite number of "counts" in the spring Examinations conducted by the College Entrance Board or the New York State Education Department may take examinations conducted by the University in the fall in the College building at 28th Street and First Avenue. A description of the subjects for which credit may thus be gained, and with the number of "counts" allowed for each, are given below.

To make these examinations of the utmost use, the University authorities have decided to duplicate the examinations ordinarily conducted in the fall at Ithaca only, and to open them to applicants for admission to all departments. Permits to take these September examinations in New York City must be secured by filing the requisite credentials at the Registrar's office in Ithaca. The permits should be obtained at least twenty-four hours before the date of the examination to be taken. They will be sent by mail upon application. If entrance to the Medical Department only is desired, the permit for the examinations may be obtained by application either to the Secretary of that Department in New York, or to the Registrar in Ithaca.

The following table shows the equivalent subject as given under the College Entrance Examination Board, and the number of counts allowed for each by the New York Education Department :

Cornell University Subject.	"Counts."	Equivalent College Entrance Board Subject.
1. English.	13	English a, b.
2. Ancient History (to 814 A.D.).	5	Ancient History.
3. Modern History (from 814 A.D.).	5	Mediæval and Modern Hist.
4. American History (inc. Civil Government).	5	American Hist. and Civil Government.
5. English History.	5	English History.
6. Plane Geometry.	5	Plane Geometry.
7. Elementary Algebra.	7	Elementary Algebra.
8. Solid Geometry.	2	Solid Geometry.
9. Advanced Algebra.	3	Advanced Algebra.

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Cornell University Subject.	Equivalent College Entrance "Counts." Board Subject.
10. Plane Trigonometry.	2 Plane Trigonometry.
	1 Spherical Trigonometry.
11a. Elementary German.	10 Elementary German.
	5 Intermediate German.
11a. and b. Advanced German.	5 Advanced German.
12a. Elementary French.	10 Elementary French.
	5 Intermediate French.
12a. and b. Advanced French.	5 Advanced French.
13a. Elementary Spanish.	10 Elementary Spanish.
	5 Intermediate Spanish.
13a. and b. Advanced Spanish.	5 Advanced Spanish.
14. Latin Grammar.	2 Latin Grammar.
14a. Cæsar.	6 Cæsar.
14b. Latin Composition.	2 Latin Composition.
14c. Cicero.	4 Cicero.
14d. Virgil.	4 Virgil.
	2 Cornelius Nepos, first 15 lives.
	2 Sallust, Catiline.
	2 Ovid.
	1 Advanced Prose Composition.
	1 Trans. at sight of Latin Prose.
	1 Trans. at sight of Latin Poetry.
15. Greek Grammar.	2 Greek Grammar.
15a. Xenophon.	6 Xenophon.
15b. Greek Composition.	2 Greek Composition.
15c. Homer.	3 Homer.
	1 Advanced Prose Composition.
	1 Trans. at sight of Greek Prose.
	1 Homer at sight.
16. Physics.	5 Physics.
17. Chemistry.	5 Chemistry.
18. Botany.	5 Botany.
	5 Physical Geography.
19. Geology.	
20. Zoölogy.	
21. Drawing.	3 Drawing.

A full description of the subjects required for entrance into the

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Medical Department is given below. The description of the other subjects can be found in the University Register.

English.—1. One hour of examination is assigned to answering questions upon the books marked *A*. Two more hours are occupied with writing longer papers upon subjects taken from the books marked *B*.

The books prescribed for 1907 and 1908 are: *A*, Shakespeare, *The Merchant of Venice*, *Macbeth*; *The Sir Roger de Coverley Papers in the Spectator*; Irving, *Life of Goldsmith*; Coleridge, *The Ancient Mariner*; Scott, *Ivanhoe*, *Lady of the Lake*; Tennyson, *Gareth and Lynette*, *Elaine*, *The Passing of Arthur*; Lowell, *The Vision of Sir Launfal*; George Eliot, *Silas Marner*. *B*, Shakespeare, *Julius Cæsar*; Milton, *Lycidas*, *Comus*, *L'Allegro*, *Il Penseroso*; Burke, *Conciliation with America*; Macaulay, *Essay on Addison and Life of Johnson*.

The examination is not designed to test the candidate's familiarity with the history of English literature or with the minutiae of the books prescribed, but to test his ability to express himself readily and easily in accordance with the usages of ordinary prose composition. To this end the candidate is urgently advised:

a. To train himself in writing concise paragraphs in answer to questions upon the most striking narrative and descriptive incidents in the books of the *A* list.

b. To study more systematically the contents of the books of the *B*-list, endeavoring to retain a knowledge of each book as an organized whole. This result will be best secured by writing numerous essays or compositions of considerable length upon the general purport of each book.

c. To cultivate—in all his writings—the habits of correct grammar and spelling (including proper names characteristic of the books read), of correct sentence-structure, punctuation, and paragraphing.

d. To avoid most carefully the error of believing that the mere oral memorizing of the contents of the books prescribed is the kind of preparation desired. The candidate is expected to learn from these books the art of expressing himself.

In every case the University examiner will treat mere knowledge of the books as less important than the ability to write good English.

Plane Geometry.—The usual theorems and constructions contained in the best text-books on this subject, including the general properties of plane rectilinear figures, the circle and the measurement of angles, similar polygons, areas, regular polygons and the measurement of the circle.

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Also the solution of original exercises, including loci problems, and the mensuration of lines and plane surfaces.

(A knowledge of the metric system of weights and measures is assumed in all the examinations in mathematics.)

Elementary Algebra.—As much as is contained in the better American and English text-books on this subject, including in particular :

The four fundamental operations with rational algebraic expressions, factors, common divisors and multiples, involution, including the binomial theorem for positive integral exponents, radicals, including the extraction of square roots of polynomials and of numbers, fractions, including ratio and proportion, fractional and negative exponents, and arithmetic and geometric series.

Also the solution of equations of the first degree (both numerical and literal) involving one or more unknown numbers, the solution of quadratic equations, and of the easier cases of equations involving one or more unknown numbers that can be solved by the methods of simple or quadratic equations.

It is assumed that pupils will be required throughout the course to solve numerous problems which will involve putting questions into equations, and to fully discuss their solutions. Some of these should be practical problems chosen from mensuration, physics, etc.; the use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

Elementary German.—(6 Units).—(a) The examination will require an accurate knowledge of the principles of grammar, and especially of the declension of articles, adjectives, pronouns, and nouns; the conjugation of verbs; the prepositions and their government; the uses of modal auxiliaries; the elementary rules of syntax and word order. The proficiency of the applicant will be tested by questions on the above topics and by the translation into German of simple English sentences. (b) Translation at sight of a passage of easy prose containing no rare words. It is believed that the requisite facility can be acquired by reading not less than two hundred duodecimo pages of simple German.

Practice in pronunciation, in writing German from dictation, and in the use of simple German phrases in the class room is recommended.

Elementary French.—(6 Units).—(a) The translation at sight of ordinary nineteenth-century prose. It is important that the passages set be rendered into clear and idiomatic English. It is believed that the power of translating at sight ordinary nineteenth-century prose can be

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acquired by reading not less than four hundred duodecimo pages from the works of at least three different authors. Not more than one-half of this amount ought to be from works of fiction. This number of pages is to include not only prepared work, but all sight reading done in class. (b) The translation from English into French of sentences or of a short connected passage, to test the candidate's familiarity with elementary grammar. Elementary grammar is understood to include the conjugation of regular verbs, of the more frequent irregular verbs, such as *aller*, *envoyer*, *tenir*, *pouvoir*, *voir*, *vouloir*, *dire*, *savoir*, *faire*, and those belonging to the classes represented by *ouvrir*, *dormir*, *connaître*, *conduire*, and *craindre*; the forms and positions of personal pronouns, the uses of other pronouns and of possessive, demonstrative and interrogative adjectives; the inflection of nouns and adjectives for gender and number, except rare cases; the uses of articles, and the partitive constructions.

Pronunciation should be carefully taught and pupils be trained to some extent to understand spoken French. The writing of French from dictation is recommended as a useful exercise.

Elementary Spanish (6 Units).—(a) The rudiments of grammar, including the conjugations of the regular and the more common irregular verbs, the inflection of nouns, adjectives and pronouns, and the elementary rules of syntax. (b) Exercises containing illustrations of the principles of grammar. (c) The reading and accurate rendering into good English of from two hundred to two hundred and fifty duodecimo pages of graduated texts, with translation into Spanish of easy variations of the sentences read. (d) Careful drill in pronunciation and writing Spanish from dictation.

Suitable texts for the elementary work are: Moratín's *El Sí de las Niñas*; Caballero's *La Familia de Alvarada*; Alarcón's *El Capitán Veneno*, and Valera's *El Pájaro verde*.

Latin (18 Units).—Candidates are examined in the entrance requirements adopted by the College Entrance Examination Board. These are:

a. i. **LATIN GRAMMAR**: The inflections; the simpler rules for composition and derivation of words, syntax of cases and the verbs; structure of sentences in general, with particular regard to relative and conditional sentences, indirect discourse, and the subjunctive; so much prosody as relates to accent, versification in general, and dactylic hexameter.

ii. **LATIN COMPOSITION**: Translation into Latin of detached sentences and very easy continuous prose based upon Cæsar and Cicero.

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b. CÆSAR: Any four books of the *Gallic War*, preferably the first four.

c. CICERO: Any six orations from the following list, but preferably the first six mentioned: The four orations against Catiline, Archias, the Manilian Law, Marcellus, Roscius, Milo, Sestius, Ligarius, the fourteenth Philippic.

d. VIRGIL: The first six books of the *Æneid*.

Proposed Course for the Degree in Arts (A.B.) and in Medicine (M.D.).

As a liberal education in the arts and sciences is of great advantage to prospective students of medicine, all who can are urged to take the Freshman, Sophomore, and Junior years in the Academic Department at Ithaca. After the completion of these years in the Academic Department (in which all the work is elective) the student is permitted to elect, as the fourth year of his A.B. course and first year of his M.D. course, a year's work in the Medical Department at Ithaca. He may then take his fifth year of work—the second of the medical course—either in Ithaca or in New York; but he must take the last two years of the medical course in New York. In this way he will obtain the A.B. degree at the end of four years, and the M.D. degree at the end of seven years of study. This is possible because the first two years of the medical course in New York are offered in duplicate at the University in Ithaca.

Women must take the first two years in medicine in Ithaca, where special accommodations are provided for them in the Sage College. They are received at the Medical College in New York City in the third and fourth years only.

Students who have taken the A.B. degree, as above, will, if they have anticipated in the Academic Department the scientific studies prescribed in the medical course, be admitted to advanced standing in the Medical College in New York. Those who have completed all the subjects prescribed for the first two years of the course in medicine will be admitted to the third-year class. After passing the requisite examinations at the end of this and then of the fourth year, they will be advanced to practically a fifth year, consisting almost entirely of practical training. At its close, provided the work has been satisfactory, the M.D. degree will be conferred. As this fifth year gives opportunity for more than the requisite work, students who have taken the A.B. degree in the Aca-

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demic Department may, even if deficient in one or more of the prescribed subjects of the medical course, still be admitted to the third-year class in New York, but only upon the recommendation of the Medical Faculty at Ithaca.

The schedule of this fifth year will be somewhat as follows:

There will be weekly recitations in the subjects of Medicine, Surgery, Anatomy, Materia Medica and Therapeutics, and Obstetrics and Gynæcology. A competent corps of instructors is suggested by the Faculty, but the students are at liberty to make their own selection and financial arrangements in quizzing, the chief object of which is preparation for the competitive examinations for the appointment of internes held each spring by the various hospitals. The fee for such "quizzes" averages about \$100, and the time will be from 5 to 6 P.M., or at any other convenient hour daily. The rest of the day is to be devoted to practical training in the College dispensary and laboratories. In the dispensary the departments of General Medicine and General Surgery hold morning and afternoon sessions. The afternoon hours are devoted to the eleven specialty departments of Neurology, Gynæcology, Pediatrics, Laryngology, Orthopædic Surgery, Dermatology, Ophthalmology, Otology, Diseases of the Genito-Urinary System, Radiography, and Psychopathology.

The Ithaca students who take this fifth year will act as regularly appointed clinical assistants in these various departments for the twelve months following the conclusion of their fourth year of medicine. Groups of five will serve during the morning hours, on alternative days, in the Departments of General Medicine and Surgery. At the end of six months, those who have had the privilege of selecting in the order of standing at the end of the fourth year general medicine will change to general surgery, and *vice versa*. In the mornings of the days when not engaged in the dispensary, these groups of five students will report in one of the laboratories of clinical or histological pathology or bacteriology and, as they may elect, either pursue research work upon a subject to be selected after consultation with Professor Ewing, or act as assistant (unpaid) instructors in the class-room work in these laboratories. The results of research work, if satisfactory, will be included in the regular publications of the Department of Pathology.

During the afternoons, groups of not more than three students will serve in rotation as clinical assistants in each of the eleven specialty departments of the dispensary. The length of time spent in each depart-

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ment will vary somewhat with the number of students and the duration of vacation desired; but at present it is expected that about one month will be devoted to daily attendance in each specialty. It is the intention of the Faculty to allow the utmost liberty in the selection of courses consistent with the acquirement of a thorough general and practical education. For this reason, if desired, the student will be assisted in obtaining the position of clinical assistant in any dispensary or department of a dispensary which supplies opportunities equivalent to those offered by the College. The internes in the various city hospitals are often forced to absent themselves from duty on account of sickness or other reasons. The members of the Faculty who visit such hospitals can thus frequently supply substitutes from competent students for these positions for longer or shorter periods. Such places, of course, cannot be promised in advance, but may confidently be expected by a greater or less number.

The required work of this fifth year is then briefly summarized as follows:

A quiz of at least one hour a week in each of the subjects of Medicine, Surgery, Anatomy, Materia Medica and Therapeutics, and Obstetrics and Gynæcology from October to April inclusive. At least two hours' daily service for four months each (preferably in the morning) in general medicine and general surgery in the College dispensary; at least two hours' daily service for one month (preferably in the afternoon) in each of the eleven specialty departments of the College. If any of the work is elected in another dispensary or hospital, it must be one under the supervision of some member of the Faculty.

The fees for this year will be \$100, payable in advance to the College; and a graduation fee of \$25, payable at the end of the fifth year; and the fee payable to the quiz masters, of not more than \$100.

CALENDAR OF REGENTS' ACADEMIC EXAMINATIONS.

YEAR.	JAN.	JUNE.	SEPT.
1907	21-25	17-21	25-27
1908	27-31	15-19	14-16

NOTE.—September examinations will be held in New York, Albany, Syracuse, and Buffalo, for law and medical students only. The other examinations are held in

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New York at the Grand Central Palace, Lexington Ave. and 43d St., and in numerous academies and high schools throughout the State for professional and academic students.

Extracts from Regents' Rules.

ORDER OF STUDIES.—There is no restriction in the order in which studies may be taken. Advanced students who may come from other States, or who, for other reasons, have not passed in elementary subjects, may take them at any time: *e. g.*, arithmetic after algebra or geometry; English composition after rhetoric, etc.

TIME LIMIT.—There is no limit of time, but all credentials issued by the University are good until cancelled for cause. Studies necessary to obtain any credential may be passed at different examinations.

Seventy-five per cent. of correct answers is required in all subjects.

Answer papers will be reviewed in the Regents' office, and all papers below standard will be returned to the candidates. For those accepted, pass-cards will be issued.

PASS-CARDS.—A Regents' pass-card is not limited in time; therefore it is not necessary to pass any Regents' examination a second time.

MEDICAL-STUDENT CERTIFICATE.—When all requirements are fulfilled, the Regents grant a medical-student certificate on payment of a fee of 25 cents.

On receiving this certificate, the candidate must send it to the secretary or recording officer of the university or college at which he intends to study medicine.

N. B.—*Candidates for medical students' examination should send notice at least ten days in advance, stating at what time and in what studies they wish to be examined, that required desk-room may be provided at the most convenient place.*

Candidates who fail to send this advance notice will be admitted only so far as there are unoccupied seats.

Medical-Student Certificates Without Examinations.

Students who may be entitled to the medical-student certificates on equivalents are advised to present or forward their credentials to the Secretary of the College, who will send them to the Regents for examination and approval. They will be returned as soon as verified, and, if accepted, the proper certificate will be sent with them.

Other equivalent credentials from foreign countries or from other States may be accepted by the Regents at their discretion.

The secretary will furnish full information on request.

Directions for Obtaining a Regents' Medical-Student's Certificate.

1. Give the full name of the applicant, the exact name of the institution and of the department attended, an accurate description of the course pursued, using the same terms that are given in the official announcement, circular, or catalogue of the institution.

Send an official announcement, circular, or catalogue of the institution, showing:

- (a) Requirements for admission; *i.e.*, subjects and years given to their completion.
- (b) Requirements for graduation in each course, including subjects pursued and time devoted to each.

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Amendment to Medical Law, 1902.

At their meeting, July 1, 1901, the Regents took the following action:

Voted, That, beginning with the September, 1901, medical licensing examinations, a recent photograph of each candidate be required as a part of the application for admission.

In accordance with the medical law, as amended in 1902, the Regents admit conditionally to the tests in anatomy, physiology and hygiene, and chemistry, applicants 19 years of age certified as having studied medicine not less than two full years of at least nine months each, in two different calendar years, in a medical school registered as maintaining at the time a satisfactory standard; provided that such applicants are of good moral character, have the requisite preliminary education, and pay the fee of \$25; the final examinations in surgery, obstetrics, pathology and diagnosis, and therapeutics, including practice and materia medica, to be passed after having finished the full period of study and having received the medical degree.

Candidates who have studied medicine not less than the minimum period of two years, whether undergraduates or graduates in medicine, are admitted conditionally as aforesaid to the examinations in anatomy, physiology and hygiene, and chemistry; if such applicants fail to attain 75 per cent. in one or more of these three topics they must be reexamined in all topics and must wait at least six months before reexamination; and candidates failing to obtain at least 75 per cent. in one or more of the topics at the final examinations in surgery, obstetrics, pathology and diagnosis, and therapeutics, including practice and materia medica, after having passed in the three preliminary topics, must be reexamined in all four of the final topics and must wait at least six months before reexamination.

The Regents may, in their discretion, accept as the equivalent of the first year in a registered medical school evidence of graduation from a registered college course; provided that such college course shall have included not less than the minimum requirements prescribed by the Regents for such admission to advanced standing.

Registration and Matriculation.

Students on entering the College must register at the secretary's office, and pay the registration fee of \$5. The payment of this fee is required only once. They will receive a receipt which will be exchanged for a certificate of full matriculation when they shall have complied with the requirements stated on page 22. No conditional matriculation will be accepted. The full 60 count Regents' certificate, including the 30 counts in the subjects specified, must be presented.

Advantages Gained by Preliminary Education.

Graduates of Cornell, Yale, Harvard, Princeton, University of Pennsylvania, Johns Hopkins, Columbia, University of Michigan, and other accredited universities, who have taken either a preparatory medical course or special work in organic or inorganic chemistry, physics, or physiology, will be allowed credit for the work which they have done,

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and may be excused from the recitations upon these subjects, and from the exercises of the chemical laboratory in the first year, provided they pass examinations before the professors of these departments, and provided they give to dissection and electives as described on pages 41-42, in the various departments, a full equivalent in hours to the subject they may have passed by examination.

Students who have had training in microscopical technique or in histology will be given advanced work in the histological laboratory.

Admission to Advanced Standing.

Students who have already attended the requisite number of courses in other accredited medical colleges, may be admitted to advanced standing in any one of the years of the four years' course of the Cornell University Medical College, by presenting the requisite Cornell Regents' medical-student certificate and by passing examinations in the subjects described on pages 84-86 as completed, in the year or years previous to that which the student desires to enter. The applicant must also present certificates of having satisfactorily completed laboratory courses equivalent to those required of the Cornell medical students in the year or years previous to that to be entered.

According to law, no student applying for advanced standing from a Medical School which has not been registered by the Regents may obtain a degree on less than two years of medical study in this State.

Holders of Special Degrees.

Graduates of pharmacy or of dental or veterinary or other professional schools, who can present satisfactory evidence of having completed any course of study required in any year by this College, may upon passing a satisfactory examination be excused from attendance upon instruction in that subject, provided they take equivalent additional work in other branches.

Admission to Special Courses.

Graduates in medicine, or students who desire to pursue a special course without graduation, are admitted to registration as special students, after approval by the head of the department conducting the course, without Regents' or other preliminary examination. Such special courses do not count in any way as part of the four years' course required of candidates for the degree of doctor in medicine. Further information regarding such courses, fees, etc., may be obtained by addressing the Secretary of the Cornell University Medical College, First Avenue, 27th to 28th Street, New York.

NEW YORK STATE SCHOLARSHIPS.

Under the law of the State, the Commissioner of Education is empowered to award annually a number of free scholarships in Cornell University equal to the number of Assembly Districts in the State. These scholarships entitle the holder to free tuition for four years in any department of Cornell University. They are awarded on examination to candidates from the general Assembly Districts "in consideration of their superior ability and as a reward for superior scholarship in the academies and public schools of this State."

For particulars in regard to these scholarships, application should be made to the Commissioner of Education at Albany, N. Y.

Holders of State scholarships are notified that failure to register before the close of registration day involves the severance of their connection with the University and consequently the forfeiture of their scholarships. The President of the University is required by law to send immediate notice of such vacancies to the Commissioner of Education and the Commissioner fills vacancies forthwith.

UNIVERSITY UNDERGRADUATE SCHOLARSHIPS.

Pursuant to the action of the Trustees, there will annually be thrown open to competition for all members of the freshman or first-year class who are registered in courses leading to first degrees, at a special examination held at Ithaca, at the beginning of the freshman year, eighteen scholarships of the annual value of \$200 each.

Students of high ability from the State of New York will have the additional advantage of being able to secure State scholarships, as there is nothing in the University statutes to prevent a student from holding both a State scholarship and a University scholarship.

These scholarships will be awarded on the basis of examinations in three of the six groups mentioned below.

[(a) and (b), however, may not be taken by the same candidate, and every candidate must take either (b) or (c) or (d).]

(a) Algebra through quadratic equations, and plane geometry.

(b) Solid geometry, advanced algebra, plane and spherical trigonometry. (c) Greek. (d) Latin. (e) French. (f) German.

For further information in regard to the scholarships see the Register of Cornell University (Ithaca, N. Y.).

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CHARGES FOR INSTRUCTION.

First Year.

Registration*	\$5 00
Tuition	150 00
Laboratory fees	35 00
	————— \$190 00

Second Year.

Tuition	\$150 00
Laboratory fees	35 00
	————— \$185 00

Third Year.

Tuition	\$150 00
Laboratory fees	35 00
	————— \$185 00

Fourth Year.

Tuition	\$150 00
Laboratory fees	25 00
Graduation fees	25 00
	————— \$200 00

Each student is required to pay to the clerk of the College the following amounts to cover breakage in the Laboratories and Dispensary departments:

1st year, Laboratory and Dispensary	\$10 00
2d year, Laboratory and Dispensary	15 00
3d year, Laboratory and Dispensary	10 00
4th year, Dispensary	5 00

These deposits, less the amount charged for breakage, will be returned at the end of each year.

Tickets must be taken out and paid for at the beginning of the session.

SPECIAL STUDENTS.

Special students, on the recommendation of the head of the department concerned, may be admitted to any of the courses of instruction offered in the College, or to any course of instruction especially pro-

* The registration fee is payable only once, on entrance.

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vided, on the payment of a registration fee of five dollars and a tuition fee of twenty-five dollars.

The graduation fee is payable on registering for graduation. The tuition fees for the first two years at Ithaca are identical with those of the same period in New York. All fees are payable at the beginning of the term, but in special cases they may be paid semi-annually in advance. No rebate will be made in any case.

No remission of laboratory fees will be made because of previous instruction elsewhere in the subjects.

EXPENSES OF STUDENTS.

The following estimate of the annual expenses of a candidate for a degree in the Medical School is based on the statements of students:

	<i>Low.</i>	<i>Average.</i>	<i>Liberal.</i>
Matriculation (once only)	\$5 00	\$5 00	\$5 00
Tuition (as at present fixed)	190 00	190 00	190 00
Books	16 00	28 00	35 00
Chemical apparatus	4 00	5 00	6 00 up
Room	92 00	130 00	190 00 "
Board	124 00	129 00	147 00 "
Clothes and laundry	59 00	80 00	112 00 "
College incidentals	16 00	21 00	24 00 "
Other expenses	46 00	74 00	98 00 "
Graduation fee (last year)	25 00	25 00	25 00
Total	\$577 00	\$687 00	\$832 00

GENERAL STATEMENT OF THE PLAN OF INSTRUCTION.

The chief features in the scheme of instruction are through laboratory training in all the subsidiary branches, daily recitations from standard text-books, clinical teaching in dispensaries and at the bedside in hospitals, and enough didactic lectures to make clear the general principles and conflicting theories in the practice of medicine and surgery. All students in any one class advance simultaneously in the various subjects, and no section or group works apart from any other, thereby losing the opportunity to appreciate the relationship of the different subjects which at any given time may be under discussion. Allowance, however, has been made for those who through natural endowments or superior energy or previous education can outstrip their less fortunate fellows. A careful record is kept of the attendance and character of the work of every student, and by this means at the end of the year each is placed in the section to which this record entitles him. A system of electives in clinical, laboratory, and recitation work is also provided, which it is the aim of the Faculty to enlarge as opportunities arise. A student is required to master all the subjects taught in any given year before being allowed to advance to the next, as the knowledge acquired in each year is necessary for a proper understanding of that which follows. Examinations are held at the end of each session; a failure to pass not more than two subjects, one of which at least must be a laboratory subject, is allowed in the spring, but every subject must be satisfactorily passed at the beginning of the next ensuing college year, or the applicant will be compelled to repeat the work of the preceding year.

The essential feature of the entire system is the division of the classes of the several years into small sections for recitations, demonstrations, laboratory exercises, and for clinical instruction in the college dispensary, and in the wards of the numerous hospitals attended by the members of the Faculty.

The following is a statement of the curriculum in each of the four annual sessions necessary to obtain the degree of M.D., and attention is called to the careful arrangement of the instruction in time and correlation in subject-matter so as to provide for a proper understanding and assimilation of the knowledge imparted in the different departments.

If a student, without neglecting his required schedule work, desires to take advanced work and can make an opportunity to do this, without interfering with the work of other students, he shall be permitted to do so and shall receive credit for it.

The first year is devoted to anatomy—several consecutive uninterrupted hours being provided for dissection—normal histology, chemistry, physics, and embryology. The gross anatomy of the thoracic, abdominal, and pelvic viscera is demonstrated in outline in the early weeks of the session in anticipation of the examination of these organs in the histological laboratory and a consideration of their physiology in the second half of the session.

The general principles of mechanics, hydrostatics, optics, electricity, heat, and acoustics, and their application to medicine, are taught in lectures illustrated by experiments. Inorganic chemistry is studied in the laboratory throughout the year. The class is divided into small sections, each of which must attend daily one or more recitation exercises in anatomy, histology, physiology, and chemistry. These follow as closely as possible the practical work.

Students who have had the advantage of a thorough preliminary education in physics and chemistry before entering the medical school, after satisfactorily demonstrating to the professor in charge of this department, by examination or otherwise, that they are familiar with the work of the first year, may be excused from attendance upon these subjects. In their place they must elect at least one of the following courses given in the second year—namely, laboratory pharmacology, or physical chemistry.

During the second year anatomy, physiology, and chemistry are completed, and the study in text-books of medicine, surgery, obstetrics, and pathology is begun. The gross anatomy of the organs of special sense, and then that of the nervous system, is taught at the outset of the year by demonstrations to small groups of students. The demonstration of these organs is followed as closely as possible by the study of them in the histological laboratory during the first half of the session. The lectures and recitations in physiology follow the same course, and,

in connection with the study of the gross and histological aspects of the parts under discussion, are more fully comprehended. Organic and physiological chemistry are studied in the laboratory and by lectures and recitations throughout the year. At the same time a laboratory course in pharmacology is pursued, familiarizing the student with the physical and chemical properties of drugs. Bacteriology is begun, the student commencing with the preparation and care of media and the recognition of the gross and microscopical characteristics of micro-organisms.

During the first few weeks of the term lectures are delivered upon the general principles of pathology, with particular reference to the elucidation and classification of the various forms of inflammation. The substance of these lectures will form the basis of the subsequent instruction in this subject in all departments, and thus insure uniformity in the teaching and understanding of the causes of disease. These lectures are supplemented by autopsies before small sections to demonstrate gross lesions. Having obtained some knowledge of pathology, the student by means of recitations is made familiar with the principles of surgery, medicine, and obstetrics.

Students who have completed elsewhere courses in physiological chemistry or pharmacology equivalent to those of the second year, may by passing examinations at the beginning of the term be excused from further attendance upon them.

Students thus excused from part of the second-year work and those who have been allowed electives in their first year may take one or both of the following elective courses during their second year—namely: 1. Manikin course in obstetrics. 2. Obstetrical clinic. The two latter elective courses are in preparation for the required work in practical obstetrics, which, usually taken in the third, can thus be taken during the second summer if desired.

Students are allowed to take the State Board licensing examinations in the primary subjects at the end of the second year. Those intending to reside in this State are encouraged to avail themselves of this opportunity.

In the third year medicine, surgery, materia medica, therapeutics, and obstetrics are studied systematically from text-books and practically at the bedside in the dispensary, and in general clinics. A sufficient number of didactic lectures are given by the Professors of Medicine and Surgery at the beginning of the session to explain general principles in

symptomatology and diagnosis. Throughout the year the class must attend in small sections one or more daily recitations from standard text-books upon subjects previously assigned and learned. Pathology is studied in greater detail than previously, both in the laboratory and in the dead-house, and as far as possible morbid processes are demonstrated in advance of the study of the disease in the text-book or its clinical presentation.

In conjunction with the bedside teaching, instruction is given in all of the modern laboratory aids in diagnosis classified under the term of clinical pathology.

Students in groups of ten or twelve are taught the methods of examining patients for the detection of abnormal physical signs, and at the close of the session are expected to be familiar with the recognition and treatment of the common diseases and be conversant with the fundamental subjects of a medical education. The specialties taken up in this year are neurology, pediatrics, toxicology, and gynæcology. They are taught by clinical lectures as part of the general subjects of the practice of medicine, surgery, and obstetrics.

The fourth year is devoted chiefly to the study of diagnosis and treatment of disease at the bedside, in the dispensary, and in clinics. The extent of this may be inferred from the present arrangement of the schedule, which contemplates about fifty hours of hospital-ward work in medicine and nearly the same number in surgery for every student. There are as few lectures as are consistent with the proper exposition of the chief problems confronting the profession, and these are delivered at the outset of the term, in order that the student may become familiar as soon as possible with the facts which are to be taught practically. For example, to the Professor of Medicine ten didactic lectures are assigned. This proportion has to be exceeded somewhat in therapeutics, obstetrics, and the specialties, but many of these lectures are illustrated by the presentation of typical cases and are really clinics. The clinical instruction in surgery is supplemented by an operative course in which the student performs upon the cadaver all the common operations. Particular attention is also given to the methods of making medical and surgical diagnoses, and in this connection constant use is made of the bacteriological and chemical laboratories, where the student examines specimens taken at the bedside during one exercise, and reports the results to the class at the next.

Hygiene and its application in the province of the physicians and pub-

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lic health officer is taught by lectures supplemented by demonstrations of the plans and methods of the city health board.

The major part of the theoretical instruction, as in the previous years, is given by recitations in the subjects of medicine (including neurology), surgery (including orthopædic surgery and genito-urinary diseases), therapeutics, gynæcology, and pathology.

The instruction in the specialties, which is made the distinguishing feature of this final year, is begun with a few clinical lectures, and is continued by a course in the examination and treatment of dispensary patients by each student. Every one receives from fourteen to twenty-eight hours of this training (the number varies somewhat with the subject), and should become reasonably proficient in the use of instruments, the ability to make diagnoses and give relief. There is no attempt made to produce experts, but each one before graduation must know enough about the specialized branches of medicine to be a competent general practitioner.

Every student must personally attend a definite number of cases of labor, and for this purpose the maternity service open to the college offers excellent opportunities. The Faculty earnestly recommend that this work be accomplished in the summer, preferably of the third year; by the proper choice of electives it is possible in the second summer, but this is not as desirable or profitable. If taken during the regular winter session much loss in other work may result. Those who for any proper reason cannot take this course as advised in the summer, might, however, succeed in obtaining the necessary cases during the winter by selecting odd hours when not engaged in section work, and by arrangement with the office to receive telephone calls.

To meet the requirements of hospital and other boards of examination, such as those of the civil service or of the army and navy, students who wish to compete in these examinations may elect in the fourth year to have all their recitation exercises with special instructors appointed by the faculty. A separate fee is required for this service. There will in addition be elective practical courses in the dispensary as opportunity arises.

DETAILS OF THE PLAN OF INSTRUCTION.

ANATOMY.

GEORGE WOOLSEY, M.D., *Professor of Anatomy.*

IRVING S. HAYNES, M.D., *Professor of Practical Anatomy.*

WILLIAM F. STONE, M.D., *Instructor.*

Demonstrators of Anatomy.

WILLIAM F. STONE, M. D.,

FRANK S. FIELDER, M.D.,

BURTON J. LEE, M.D.,

JOHN F. CONNORS, M.D.,

WILLIAM A. DOWNES, M.D.,

JOHN J. NUTT, M.D.,

ROLAND HAZEN, M.D.,

SEWARD ERDMAN, M.D.

Anatomy is taught in the first and second years by lectures, recitations, laboratory courses, section demonstrations, and by dissection. The course in anatomy is arranged to correspond as far as possible with the courses in physiology and histology.

Lectures in the first year are confined to the practical applied anatomy of the bones and joints, and follow the recitations on these subjects. In the second year the lectures are devoted to regional surgical anatomy, the students being already well grounded in descriptive anatomy.

One lecture a week is given during the first half of the second year by the Professor of Practical Anatomy on the development and gross anatomy of the nervous system, and the topographical anatomy of one of the extremities.

Descriptive Anatomy is taught by recitations, section demonstrations and laboratory courses, and by dissection.

Recitations, from standard text-books, are held by the Instructor in Anatomy twice a week for each section of the first-year class and once a week for each section of the second-year class. During the first year the recitations are upon the bones, joints, muscles, arteries, veins, and a preliminary study of the central nervous system; during the second year upon the nervous system and the viscera.

PRACTICAL ANATOMY.

Section Demonstrations are conducted as laboratory courses in which a given region is not only demonstrated, but each member of the group is required to identify the structures on the part, specimen, or model. They are conducted by the Professor and Demonstrators of Practical Anatomy twice a week for each section during the first half of the first year and the last half of the second year, and once a week during the rest of the first and second years. During the first three months of the first year the students are taught by section demonstrations of that part of the cadaver they are next to dissect; how to dissect, what to find, and where to find it. In addition, one preliminary demonstration is given weekly from October to January on the thoracic, abdominal, and pelvic viscera, to prepare students for the courses in physiology and histology by demonstrating the organs whose function and structure they are to study. In the last half of the first year the joints are studied. In the second year the brain and nervous system, the organs of sense, the thoracic and abdominal viscera, and the perineum are studied.

Dissection.—The course in dissection is arranged on a laboratory basis—that is, the students are required to dissect during certain specified hours each day while the demonstrators are in attendance. Twelve hours a week are assigned in the schedule for this anatomical laboratory course during the first and second years, and dissection is permitted at any time after 10 A.M. that the students are at leisure.

Two courses of dissection are required. The first course for first-year students comprises the dissection of three parts—the head and neck, and the upper and lower extremities, including the joints. This course is begun after the recitations and section demonstrations have prepared each student for the part assigned to him.

The second course consists of the dissection of four parts, and is designed for second-year students and those first-year students who have completed the first course. This course includes a review of the first course, with more particular attention paid to the minuter parts and, in addition, the dissection of the brain, the trunk, with the thoracic and abdominal viscera, and the perineum. A considerable part of the second course may be finished during the first year. This will afford time in the second year for additional and advanced work after completing the required parts. Students are examined and marked on the

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dissection of each part required. Prepared bones are loaned to students during the session from a large collection kept for this purpose.

Advanced, Special, and Post-Graduate Courses.—Facilities are offered to students and the medical profession for pursuing advanced, special, and post-graduate courses in practical anatomy.

SUMMARY.*

	<i>First Year.</i>	<i>Second Year.</i>
Lectures	30 hours.	90 hours.
Demonstrations	45 hours.	45 hours.
Recitations	75 hours.	30 hours.
Dissection †	192-240 hours.	80-120 hours.

Text-Book—Gerrish, second edition.

Collateral Reading—Gray; Cunningham; Morris; Quain; Toldt's *Atlas of Human Anatomy*; Woolsey, *Applied Surgical Anatomy*; Haynes, *Guide to Dissection and Manual of Anatomy*.

PHYSIOLOGY.

Professor of Physiology.

Assistant Professor,

JOHN A. HARTWELL, PH.B., M.D.

Assistants.

JOSEPH S. WHEELWRIGHT, M.D., HORATIO B. WILLIAMS, M.D.,
J. F. COWAN, A.B.

Instruction in this branch is given by systematic and practical demonstrations and recitations to first-year students during the second half of the session, and to second-year students during the first half of the session. During the second half of the session, review recitations, covering the entire first-year and second-year courses, are held once a week for the second-year class, as a preparation for the final college and the State examinations.

* This and the following summaries represent the total number of hours for each student.

† Total of dissection required, 272-360 hours.

As a preparation for the study of physiology proper, first-year students, during the first half of the session, receive instruction in the gross anatomy of the thoracic and abdominal viscera, by section demonstrations in the department of Practical Anatomy. The histology of the heart and blood-vessels, respiratory organs, alimentary canal, and glandular organs is taught in the laboratory and by recitations.

The regular second-year work in physiology is given during the first half of the session. Second-year students receive laboratory instruction in physiological chemistry in the department of Chemistry, Physics, and Toxicology. The same department gives instruction in optics and acoustics to first-year students, which serves as a preparation for the study of vision and audition in the second year. Second-year students receive laboratory instruction from the department of Histology in the histology of the nervous system and the organs of special sense. They also receive instruction from the department of Anatomy in the anatomy of the encephalon and cranial nerves, and from the department of Histology in the functional traits in the central nervous system.

Demonstrations.—The regular demonstrations for the first-year class begin about the middle of January, and are continued three times weekly until the close of the session, on the following subjects and in the order named: The cell, blood, circulation, respiration, digestion and absorption, secretion and excretion, general metabolism, and animal heat and force. The regular demonstrations for the second-year class begin at the opening of the session, and are continued three times weekly until about the middle of January, on the following subjects and in the order named: The nervous system and the special senses. The demonstrations throughout are a combination of didactic lectures and practical illustration, the didactic method being used only in those circumstances where demonstrations before the class would fail to completely present the subject.

Throughout the entire course the subject of human physiology proper is fully covered; special attention is paid to its applications to the practice of medicine and surgery, much time being devoted to what may be called applied physiology.

Recitations, Section Work, etc.—Certain of the work in the histological laboratory is practically a part of the instruction in physiology. For first-year students, this includes laboratory work and recitations on the cell and karyokinesis, ciliary movements, blood, the histology of the simple tissues, heart, and vessels, respiratory system, digestive sys-

tem, glandular organs, and the cellular mechanism of secretion. For second-year students the instruction includes a study, in the same manner, of the nervous system, organs of special sense, and the genito-urinary system. The instruction in physiological chemistry is given in the department of Chemistry to second-year students. It includes lectures upon physiological chemistry, laboratory work, and recitations on the carbohydrates and fats, proteids and albuminoids, food-stuffs, and the digestive secretions, endosmosis and exosmosis, and the chemistry of blood, bile, urine, and the simple tissues.

A laboratory course of forty hours is given to the first-year students on the subject of Embryology. This is under the supervision of the department of Pathology.

In addition to the work in histology and physiological chemistry, and in close connection with the lectures on physiology proper, the Instructors give, three hours weekly, recitations, with frequent demonstrations and practical exercises, to each class, divided into sections of convenient size, for first-year students during the second half of the session, and for second-year students during the first half of the session.

In the section-teaching, many demonstrations, by means of specimens, models, and apparatus, will be given which cannot with advantage be made before the entire class, such as blood-counting, the capillary circulation, blood-pressure, the use of the sphygmograph, the general physiology of nerve and muscle, etc.

In the course of the section-work, students who prove themselves capable may be permitted to aid in the preparation and giving of the demonstrations when this does not interfere with other exercises, this corps of student-assistants being changed from time to time, so that the privilege may be extended to as many as possible.

SUMMARY.

	<i>First Year.</i>	<i>Second Year.</i>
Demonstrations	60 hours.	60 hours.
Recitations	45 hours.	60 hours.

Text-Book—Kirke, *Handbook of Physiology*, twentieth English edition, 1904.

Collateral Reading—Schäffer, *Text-Book of Physiology*; Stewart; Foster; Howell. Flint, *Handbook of Physiology*.

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ALLIED BRANCHES.

Physiological Chemistry (see department of Chemistry, Physics, and Toxicology).

Embryology (see department of Pathology).

CHEMISTRY, PHYSICS, AND TOXICOLOGY.

RUDOLPH A. WITTHAUS, M.D., *Professor of Chemistry.*

Assistant Professor,
IVIN SICKELS, M.D.

Instructors,

LOUIS W. RIGGS, Ph.D.,

CHARLES G. L. WOLF, M.D.

Assistants,

E. OSTERBERG,

W. McKIM MARRIOTT, A.B.

Lectures.—Students of the first year will receive three lectures each week on physics, the divisions of the subject being considered in the following order: General properties of matter and force, mechanics, hydrostatics, pneumatics, optics, electricity, heat, and acoustics. The lectures will be abundantly illustrated, and the relations of physics to surgery and medicine will be particularly considered.

During the second year, students will attend two lectures weekly. Organic chemistry will be considered in the earlier part of the term to an extent sufficient to impart a knowledge of the principles of combination of the carbon compounds and the properties and relationships of those which are of physiological, toxicological, or therapeutical interest. The lectures during the latter part of the second year will be upon physiological chemistry.

During the third year one lecture will be given weekly on toxicology for twenty weeks. In these lectures the medical and medico-legal bearings of the subjects will be chiefly considered.

Recitations.—Students of the first year will recite twice each week on the principles of chemistry and mineral chemistry. Those of the second year will recite once weekly during the first eighteen weeks of the session, and twice weekly thereafter, on organic and physiological chemistry.

Laboratory Work.—Laboratory instruction will be given students of the first year four hours weekly during the first eighteen weeks of

the session, and two hours weekly thereafter. This course will consist of an experimental study of the commoner elements and compounds in illustration of the recitation course, and of training in the processes of qualitative analysis of inorganic substances, and mineral poisons.

Students of the second year will receive laboratory instruction two hours weekly until February 14th, and four hours weekly after that date in physiological and clinical chemistry and organic toxicology.

Each student is fully supplied with all apparatus and chemicals required, except urinometers, which are carefully corrected for the student that they may serve for future use.

These courses are conducted by the instructors under the direction of the Professor of Chemistry and Physics.

First-year students presenting satisfactory evidence of having performed equivalent work in chemistry and physics may be excused from first-year work in this department, and be given advanced laboratory work equivalent in hours to that omitted.

SUMMARY.

	<i>First Year.</i>	<i>Second Year.</i>	<i>Third Year.</i>
Recitations	60 hours.	45 hours.	
Laboratory	96 hours.	84 hours.	
Lectures	90 hours.	60 hours.	20 hours.

Text-Books—Witthaus, *Manual of Chemistry*, sixth edition; Riggs, *Laboratory Manual*.

Collateral Reading—Wolf, *Laboratory Handbook*; Ganot, *Physics*.

MATERIA MEDICA AND THERAPEUTICS.

HENRY P. LOOMIS, M.D.,

Professor of Materia Medica and Therapeutics and Clinical Medicine.

Assistant Professor of Pharmacology,

ROBERT ANTHONY HATCHER, M.D., Ph.G.

Instructors,

WARREN COLEMAN, M.D.,

WILLIAM J. JONES, M.D.,

CHAS. E. S. WEBSTER, JR., M.D.,

HAROLD C. BAILEY, M.D.

Instruction is given in this department during the second, third, and fourth years by means of: 1. Lectures. 2. Clinical instruction in hospitals and dispensaries. 3. Recitations. 4. Laboratory work.

Lectures.—These are given by the Professor twice a week to the third-

year students and once a week to the fourth-year students. They are confined almost exclusively to therapeutics, as it is believed that *matéria medica* can best be taught by recitations and by laboratory work.

The lectures to the third-year students will consider the therapeutic uses of the most important drugs from the standpoint of the drug itself, such as the methods of prescribing the drug and the conditions for which it is given; only so much of the physiological action of the drug will receive attention as will explain its therapeutic value.

The lectures to the fourth-year students will be confined almost exclusively to a consideration of the systematic treatment of the different diseases. The plan of treatment will be given in detail, with definite instruction as to the drugs to be used and the preparations which are most reliable.

Lectures will be given on remedial agents other than drugs, such as massage, dietetics, climatology, mineral waters, and hydrotherapy.

Clinical Instruction.—A new departure in the teaching of therapeutics will be made by affording the students of the third and fourth years opportunity to observe the effects of the different remedies on the natural course of diseases. To accomplish this the classes will be divided into small sections and taken by the Professor into the wards of Bellevue Hospital and the New York Hospital. Actual practice is given in the employment and application of the various therapeutic agents used in medicine, such as the aspirator, leeches, cups, cautery, stomach-tube, and stupes. The hydrotherapeutic establishment connected with Bellevue Hospital is one of the most complete in the country. Here to small sections will be demonstrated the various applications of water to the treatment of disease—such as baths, packs, douches, etc. A professional masseur will show the technique of massage and the Swedish movements. The treatment of the different diseased conditions observed will be systematically studied, and opportunities will be given to the members of the class to make personal examination of the patient, and to watch the modification of disease produced by the remedies prescribed. The clinical work of the third and fourth years affords abundant opportunities for further training in practical therapeutics. A general medical clinic will be held by the Professor once a week in the amphitheatre of Bellevue Hospital, at which special attention will be given to the treatment of the diseases under consideration.

This year for the first time small sections of the fourth-year students will be taken into the College Dispensary, and instruction given in the

detailed treatment of individual patients. Opportunities to watch the results of treatment in ambulatory cases will thus be furnished. The student will take charge of certain patients under the direction of an instructor.

Recitations.—Students of the third year will recite to the instructor twice a week from a standard text-book. During the fourth year a recitation will be held once a week on therapeutics. The recitations will embrace a study of the action of all the more valuable remedial agents in connection with the description of the drugs themselves.

Each student will be thoroughly drilled in prescription-writing and in the doses of the more important drugs.

Examinations will be held at stated times during the session by the Professor to enable him to judge of each student's progress.

Laboratory Work.—The laboratory of *Materia Medica* occupies two floors of the Loomis Laboratory building; it is provided with a complete assortment of crude drugs and with all the various preparations of the *Materia Medica*; also with appliances for instruction in the methods of manufacturing pharmaceutical preparations. The laboratory is equipped with instruments and appliances for special research in the physiological action of drugs. The large class-room is supplied with sixty tables, equipped with gas, electric lights, water connections, and full apparatus, enabling each student to work separately under the supervision of the instructors.

The course of laboratory instruction is taken during the second year, and consists of six hours each week for half the year. The class is divided into small sections, which are under the personal supervision of the instructors. The method of teaching is distinctly practical. Instruction includes numerous exercises involving the manipulation of crude drugs and preparations, the occasion being used to review their physical, chemical, and medical properties.

About half of the laboratory course will be devoted to demonstrations and operations by the students upon frogs and mammals. This instruction, termed pharmacodynamics, is recognized as essential for a correct understanding of therapeutics.

In addition to these exercises the student will have frequent opportunities for examining the extensive *materia medica* collection, the ability to recognize the more important specimens being obligatory.

Considerable attention will be paid to prescription writing, and test prescriptions are compounded by members of the class.

CORNELL UNIVERSITY MEDICAL COLLEGE.

SUMMARY.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		47 hours.	30 hours.
Recitations		60 hours.	30 hours.
Laboratory	90 hours.		
Clinics		30 hours.	30 hours.
Sections		5 hours.	10 hours.

Text-Book—White's *Materia Medica and Therapeutics*.

Collateral Reading—Coleman, *Syllabus of Materia Medica*; The *Prophylaxis and Treatment of Internal Diseases*; Forchhäuser; Thompson, *Practical Dietetics*; Sollmann, *Pharmacology*; Hatcher and Sollmann, *Text-Book of Materia Medica*.

MEDICINE.

W. GILMAN THOMPSON, M.D., *Professor of Medicine*.

Professors of Clinical Medicine,

ALEXANDER LAMBERT, M.D.,

CHARLES E. NAMMACK, M.D.,

WARREN COLEMAN, M.D.,

LEWIS A. CONNER, M.D.

THOMAS WOOD HASTINGS, M.D., *Professor of Clinical Pathology*.

Instructors and Assistants,

C. N. BANCKER CAMAC, M.D.,

JOHN W. COE, M.D.,

MONTGOMERY H. SICARD, M.D.,

WALTER L. NILES, M.D.,

FREDERICK L. KEAYS, M.D.,

NATHANIEL R. NORTON, M.D.,

THEODORE B. BARRINGER, M.D.,

MORTIMER WARREN, M.D.,

BERT R. HOOBLER, M.D.,

HUGHES DAYTON, M.D.

The **Course of Medicine** comprises a graded plan of study extending throughout three years. General didactic lectures upon the practice of medicine are wholly supplanted by bedside and dispensary instruction and recitations. The course includes the following subdivisions:

Second Year:

Recitations from a text-book upon elementary medicine, with written reviews.

Third Year:

1. Recitations from an advanced text-book, with written reviews.

2. Physical diagnosis of the heart and lungs.

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3. History-recording.
4. Bedside course in symptomatology.
5. Dispensary course in general medicine.
6. Clinical pathology.
7. Twenty lectures on symptomatology.
8. Hospital medical clinics.

Fourth Year:

1. Advanced bedside study in symptomatology and diagnosis.
2. Demonstrations of patients by the student before the class in the out-patient clinic.
3. Physical diagnosis.
4. Hospital medical diagnosis clinics.
5. Medical conferences.
6. Ten lectures upon diatheses, toxæmias, etc.
7. Elective advanced work in clinical diagnosis, clinical pathology, history-recording, etc.
8. Recitations in medicine.

The details of the methods of instruction in medicine for each year of the curriculum are as follows:

SECOND YEAR.

Recitations.—Second-year students begin the study of medicine with systematic recitations twice each week from an elementary text-book, in which the subjects of nomenclature, etiology, morbid anatomy, and typical symptoms only are dwelt upon.

THIRD YEAR.

Recitations.—Third-year students recite twice each week from an advanced text-book on the Practice of Medicine, special emphasis being given to symptomatology, complications, diagnosis, and treatment.

Written reviews are held at intervals to familiarize the student with examinations. All recitations are obligatory, and the recitation marks received form an important component of the final examination marks of the year.

Ward Work.—Systematic and obligatory ward work is begun in classes not exceeding fifteen students each, who accompany the Professors of Clinical Medicine on rounds through the hospital wards. Examples of all the common diseases are studied, and the student has opportunity personally to examine many cases of disease in different stages of development, and of following their daily progress. A special

course in general medical diagnosis is given at the bedside, in which the student observes cases illustrating all the important physical examinations.

Dispensary Classes.—Students in small classes are instructed in general medical diagnosis by Dr. Barringer and Dr. Dayton in the new Out-Patient Department of Bellevue Hospital.

Clinical Laboratory Courses are conducted in immediate connection with the study of hospital and dispensary cases.

The laboratory is designed to meet the three requirements of:

(1) *Teaching*; (2) *Original Research*, and (3) *Diagnosis*.

(1) *Teaching*. The third-year class is divided into small sections, so that each member receives the personal assistance of the demonstrator. At the conclusion of the course a written and practical examination is held, and the result of this, as well as the character of the work done by each student, is included in the general average mark received by him in medicine. When assigned to cases at the general medical clinic in the fourth year the student is required to report the result of his examination of the sputum, blood, urine, etc.

The apparatus employed may readily be transported to the bedside, the work being thus essentially practical, and the student *himself* uses it so that he may become familiar with its care and application.

The course comprises the thorough study of the sputum, blood, gastric contents, fæces, urine, exudates and transudates.

Each student is furnished typical specimens which he stains and studies at the demonstrations.

(2) *Original Research*. Facilities are offered to graduate and undergraduate special students for the undertaking and publication of original investigations.

(3) *Dispensary, Hospital, and Clinical Laboratory Examinations*. The laboratory is a working part of the Cornell Dispensary. The visiting staff of this Dispensary, as well as that of the Second Division of Bellevue Hospital, use the laboratory extensively for completing the data of their cases. Students who have completed their third year, and whose standing is good, may, under the supervision of the instructors, employ their summer months in following this work in the laboratory.

Physical Diagnosis.—Physical diagnosis of the chest is taught in classes not exceeding a dozen students each. This course of 30 lessons for each class is very comprehensive, owing to the large number of patients in the class of heart and lung diseases at the College Dis-

CORNELL UNIVERSITY MEDICAL COLLEGE.

pensary and in the wards and Out-Patient Department of Bellevue Hospital.

The work consists of the study of:

- (1) Medical anatomy of the normal thorax and physical signs of the contained viscera.
- (2) Pathological conditions of the thoracic viscera with special reference to Methods of Physical Examination; Physical Signs in Disease.

General Medical Clinics.—Students of the third year are required to attend a clinic in general medicine conducted by Professor Lambert (commencing in December), and also the clinic in medical diagnosis conducted by Professor Thompson, and the clinic in general therapeutics by Professor Loomis, as described for the fourth year. These clinics are held weekly in the amphitheatre of Bellevue Hospital.

Lectures.—A course of twenty lectures upon general symptomatology is given by the Professor of Medicine, which is designed as introductory to the systematic bedside teaching which he conducts upon hospital rounds.

FOURTH YEAR.

Bedside Instruction is given by the Professor of Medicine to sections not exceeding fifteen students, in the wards of the Presbyterian Hospital until January 1st, and in those of Bellevue Hospital thereafter, throughout the year. In these sections each student is assigned in turn to special cases for thorough study. Ward classes are also conducted by Dr. Conner at the Hudson Street Hospital, and by Drs. Lambert and Nammack in Bellevue Hospital.

Clinics.—Medical clinics are held weekly in the amphitheatre of Bellevue Hospital by the Professor of Medicine. At these clinics students read written histories of cases which they have previously studied in the hospital wards. They are required to demonstrate their findings upon the patient, and are questioned before the entire class in regard to diagnosis, etc. These clinics are also utilized by the Professor of Medicine to exhibit cases of exceptional rarity or difficult diagnosis, and a few of them are conducted in coöperation with the Professor of Surgery in order to present to the students the value of conjoint medical and surgical points of view in appropriate cases. A second general medical clinic is held weekly in the Bellevue amphitheatre by the Pro-

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fessor of Therapeutics, at which the effects of treatment are made the prominent feature.

An out-patient clinic is also held weekly by the Professor of Medicine in the Dispensary of the College, at which students are given ample opportunity to examine patients, study minor ailments, as well as all the forms of disease in the ambulatory cases of a large and varied clinical service.

Dispensary Classes, comprising a dozen students each, are conducted in periods of five weeks for two hours twice a week. The students are taught methods of complete general physical examination, diagnosis, prognosis and treatment, and of history recording. Opportunity is afforded to follow the progress of cases from week to week, and to make clinical examinations of the sputum, blood, etc., in each case.

Lectures.—A course of ten lectures is given by the Professor of Medicine upon such general topics as the diatheses, toxæmias, auto-intoxication, cachexias, etc. Three lectures are also given by Dr. Conner upon the Internal Secretions, and three lectures by Dr. Camac upon the Recent Advances in the Clinical and Pathological Studies of Heart Disease.

Medical Conferences.—Under Dr. Coleman's direction, students are assigned to special cases which they study in detail for several weeks, reviewing the literature of the subject, and which they then report in writing at a medical conference, at which their fellow-students are called upon to offer criticisms and general discussion.

An elective course in advanced clinical pathology and diagnosis is offered in the fourth year.

SUMMARY.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		20 hours.	10 hours.
Recitations	45 hours.	60 hours.	30 hours.
Clinics		46 hours.	60 hours.
Sections		55 hours.	83 hours.

CLINICAL PATHOLOGY.

Laboratory	60 hours.
Recitations	6 hours.

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Text-Books—Osler, *Practice of Medicine*; Musser, *Medical Diagnosis*; Tyson, *Physical Diagnosis*; Salinger and Kalteyer, *Medicine*; Woods, *Chemical and Microscopical Diagnosis*.

Collateral Reading—Loomis-Thompson, *American System of Practical Medicine*.

SURGERY.

LEWIS A. STIMSON, M.D., *Professor of Surgery*.

Professors of Clinical Surgery,

FREDERIC S. DENNIS, M.D.,	ALEXANDER B. JOHNSON, M.D.,
GEORGE WOOLSEY, M.D.,	FREDERICK GWYER, M.D.,
FREDERICK KAMMERER, M.D.,	PERCIVAL R. BOLTON, M.D.,
CHARLES L. GIBSON, M.D.	

Instructors,

BENJAMIN TILTON, M.D.,	ARCHIBALD E. ISAACS, M.D.,
JOHN ROGERS, M.D.,	JAMES MORLEY HITZROT, M.D.,
GEO. E. DODGE, M.D.,	J. PRESCOTT GRANT, M.D.

Assistant,

CLARK S. GOULD, M.D.

Surgery is taught in the recitation room, at the bedside, in the dispensaries, at hospital clinics, and by lectures.

In the second year the students are required to attend recitations on the principles of surgery two hours a week throughout the term. For this purpose the class is divided into small sections to insure thorough work; so far as time permits instruction will also be given at the bedside.

In the third year recitations are continued upon regional surgery; the class is instructed in sections in Bellevue Hospital in history-taking and methods of surgical examination and diagnosis, three hours a week for part of the term; and also two hours a week bedside instruction. Formal clinics are held in Bellevue, New York, and other hospitals; about forty lectures are given by the Professor of Surgery, and a clinic for diagnosis is held once a week throughout the term, at which the students are required personally to examine and report upon the cases.

In the fourth year the students receive clinical instruction in small

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groups in several hospitals and dispensaries upon general surgery and the special branches—eye, ear, nose and throat, genito-urinary diseases, gynæcology, dermatology and orthopædics; may attend the lectures and clinics, and will have a review quiz in preparation for examination.

The members of the sections are trained in the examination of patients, the dressing of wounds and fractures, the administration of ether and assisting at operations.

The opportunities for instruction in the special branches are exceptionally ample. There are several clinical teachers in each subject, each with hospital and dispensary services. The student will be enabled directly to examine and study cases, and will have a certain choice as to the time given to each branch.

In addition to the clinics at Bellevue and the New York hospitals specified above, Professor Kammerer will give clinics once a week at the German Hospital, which the seniors attend in groups of twelve. Clinics of a similar character by other members of the faculty will be announced from time to time as opportunity during the session arises.

Lectures on special topics are given in the college lecture courses in the second term, to which students of all the classes are admitted.

Operative Surgery is taught to small sections of the class in the fourth year. The course consists of recitations, work upon the cadaver, and the application of bandages and plaster dressings. As the material is abundant, each member of the class will perform the principal surgical operations.

Special instruction in operative surgery is offered to graduates in medicine. A circular giving particulars may be had on application to the Secretary.

SUMMARY.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		60 hours.	30 hours.
Recitations	60 hours.	60 hours.	30 hours.
Clinics		86 hours.	86 hours.
Sections		40 hours.	25 hours.
Operative Surgery . .			30 hours.

Text-Book—Tillmann.

Collateral Reading—*American Text-Book*; Parks, *Surgery*; Stimson, *Fractures and Dislocations*; *Operative Surgery*; Dennis, *System of Surgery*.

OBSTETRICS.

J. CLIFTON EDGAR, M.D., *Professor of Obstetrics and Clinical Midwifery.*

Instructors,

GEORGE D. HAMLEN, M.D.,

I. L. HILL, M.D.,

ALBERTUS A. MOORE, M.D.,

GUSTAVE SEELIGMANN, M.D.

Instruction in obstetrics will be given during the second, third, and fourth years by—

1. Recitations. 2. Illustrative lectures. 3. Obstetric clinics and conferences. 4. Attendance upon cases of confinement. 5. Manikin practice and section work. 6. Obstetric histology, pathology, and bacteriology.

1. Recitations from a standard text-book will be held by an instructor in obstetrics during the second year upon the physiology, and during the third upon the pathology, of obstetrics, the latter including obstetric surgery.

These recitations are so scheduled as to cover the field of the subject laid out for the college year, are supplementary to the work of the Professor of Obstetrics during each of these two years, and prepare the student for an intelligent appreciation of his subsequent illustrative lectures, attendance upon cases of confinement, clinics, and manikin practice.

2. The Illustrative Lectures comprise a systematic course running through the third year, upon the physiology and pathology of obstetrics.

These lectures are theoretical to a limited extent only, being mainly demonstrative and illustrative in character. To this end ample black-board space is used, as well as an abundant collection of pelves, entire, normal and deformed, mesial sections of the same, and in addition a supply of diagrams, charts, carefully selected plaster, composition, and metal models, wet and dry preparations, and instruments.

3. Obstetric Clinics and Conferences.—A weekly obstetric clinic is held by Professor Edgar a portion of the year for both the third- and fourth-year classes at the Manhattan Maternity and Dispensary, 327 East 60th Street. At this clinic abnormal cases of pregnancy, labor, and the puerperium are demonstrated, and the major and minor obstetric operations performed.

In addition, infant feeding and the care of mother and child during

the lying-in period and early infancy are taught. During both the third and fourth year, members of the class will be called upon to examine patients and discuss etiology, diagnosis, prognosis, and treatment.

4. Attendance upon Cases of Confinement.—Each candidate for the degree of M.D. is required to present satisfactory evidence to the effect that he has attended a definite number of cases of confinement. To fulfil this requirement students may register as internes in the Manhattan Maternity and Dispensary, 327 East 60th Street, and receive this practical instruction from Professor Edgar and the instructor in obstetrics. Students are lodged in the above hospital for periods of two weeks or more, and attend confinement cases both in the hospital building and in the tenement-house districts of the upper east side of the city.

During the student's attendance upon his practical maternity course he may be excused from the exercises of the College during the fourth college year, otherwise he shall take his practical obstetric course during vacation time. Further information concerning the practical obstetric work may be obtained by applying at the Secretary's office.

5. Manikin Practice and Section Work.—Manikin practice is given to sections of the class during the third year, and consists of work by individual students upon the manikins, under the supervision and criticism of an instructor.

The mechanical phenomena of labor; modes of delivery; abnormal presentations and positions, with methods of delivery of each; version; application of the forceps, and other manipulations, will be demonstrated by the instructor and performed by the student.

Diagrams, models, casts, wet and dried specimens, will be used in the demonstrations.

The sections will also be instructed at the bedside at the Emergency Hospital and Manhattan Maternity and Dispensary in the management of pregnant and parturient women, the care of the newborn child, abdominal palpation, and pelvic mensuration.

6. Obstetric Histology, Pathology, and Bacteriology.—Laboratory instruction is given during the third year by the Professor of Pathology upon the histology of the vulva, vagina, uterus, ligaments, Fallopian tubes, and ovaries in the pregnant and non-pregnant conditions, and upon the histology and pathology of the decidua, chorion, placenta, and umbilical cord.

CORNELL UNIVERSITY MEDICAL COLLEGE.

SUMMARY.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
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Lectures		30 hours.	
Recitations	30 hours.	30 hours.	
Clinics		15 hours.	15 hours.
Sections		15 hours.	

Text-Book—Edgar, *Practice of Obstetrics*.

DEPARTMENT OF PATHOLOGY.

INCLUDING HISTOLOGY, EMBRYOLOGY, GROSS AND GENERAL PATHOLOGY, BACTERIOLOGY, AND EXPERIMENTAL PATHOLOGY.

JAMES EWING, M.D., *Professor of Pathology*.

BERTRAM H. BUXTON, M.D., *Professor of Experimental Pathology*

JEREMIAH S. FERGUSON, M.D., *Instructor in Histology*.

OTTO H. SCHULTZE, M.D., *Instructor in Gross Pathology*.

MAX G. SCHLAPP, M.D., *Instructor in the Histology and Pathology of the Nervous System*.

WILLIAM J. ELSER, M.D., *Instructor in Bacteriology*.

JAMES C. JOHNSTON, M.D., *Instructor in Pathology*.

ISRAEL STRAUSS, M.D., *Instructor in Embryology*.

HENRY T. LEE, M.D., *Assistant in Pathology*.

GUY D. LOMBARD, M.D., *Assistant in Histology*.

RICHARD WEIL, M.D., *Demonstrator in Gross Pathology*.

CHARLES R. STOCKARD, Ph.D., *Assistant in Histology and Embryology*.

THOMAS A. NEAL, M.D., *Assistant in Gross Pathology*.

FRANK M. HUNTOON, M.D., *Assistant in Bacteriology*.

PHILIPP SCHAFFER, Ph.D., *Assistant in Experimental Pathology*.

JOHN C. TORREY, Ph.D., *Assistant in Experimental Pathology*.

OSCAR TEAGUE, M.D., *Assistant in Experimental Pathology*.

DOUGLAS SYMMERS, M.D., *Assistant in Pathology*.

HISTOLOGY.

The work in this subject is conducted throughout the first and during a portion of the second year by laboratory exercises and by recitations.

Laboratory exercises, in two two-hour sessions weekly during the first year, and one two-hour session weekly during the second year, occupy in all about 150 hours for each student. The work covers the construction and use of the microscope, the methods of preparing microscopical sections of tissues, and the normal histology of the various tissues and organs of the human body. Attention is constantly directed to the application of the knowledge to physiology, and to further this end the courses in physiology and histology proceed as far as possible in unison. When desirable the structure of human tissues and organs is illustrated by sections of embryonal and lower vertebrate tissues.

In the first year the blood and simple tissues, the gastro-intestinal tract and adnexa, and the respiratory, circulatory, and genito-urinary organs are studied. In the second year the organs of the special senses and the nervous system are considered.

Recitations.—One recitation weekly for each student is held during the first year, and the first half of the second year, on subjects assigned from the text-book on histology. These recitations are designed to completely familiarize the student with the structure of the tissues considered during the previous week in the laboratory exercises.

An examination is held at the end of each year. The standing of the student in this, as in the other subjects, is determined equally from the work in the laboratory exercises and in the recitations.

EMBRYOLOGY.

In the latter half of the first year, a series of topics in embryology, which have special importance in medicine and pathology, are presented in a laboratory course, occupying about forty hours for each student. These topics embrace the fertilization and maturation of the ovum, formation of germ layers, and the main facts regarding the development of the different systems and viscera. These topics are illustrated by microscopical sections, charts, lantern slides, and the Ziegler models. The laboratory work is supplemented by a course of fifteen lectures.

PATHOLOGY.

The course of instruction in pathology in the second year comprises a preliminary course of lectures on the theory and classification of inflammations, which is designed to acquaint the student with the main

facts in this field, to prepare him for preliminary studies in medicine and surgery, and to establish a uniform system of nomenclature to be used in this and other departments. During one half the second year, also, attendance is required at one weekly demonstration in gross pathology, at which the more common visceral lesions are exhibited. This course is designed to accompany the preliminary recitations in medicine and surgery of the second year.

The main branches of the subject are grouped in the third year in order to secure the simultaneous study of the gross and microscopical changes in diseased tissues. In the fourth year the students perform autopsies, and attend lectures in special pathology.

Microscopical Demonstrations in Pathology.—The microscopical demonstrations occupy three two-hour sessions weekly throughout the third year, in all about 175 hours. The specimens studied illustrate the topics of inflammation, tumors, autointoxications, infectious diseases, and diseases of the nervous system, and are supplemented by lectures, and special demonstrations by means of sections, charts, lantern slides, and micro-photographs.

Demonstrations in Gross Pathology.—On the days alternating with the microscopical studies demonstrations of gross pathological specimens are given to the students of the third year, with the material collected from autopsies. With the viscera of each case is presented an epitome of the clinical history, and, when necessary, frozen sections of the organs, and the clinical symptoms are explained from the gross and microscopical changes in the altered tissues. The student here sees the viscera of many of the fatal cases which he has studied in the wards of the hospital.

Gross pathological diagnosis is taught as a separate branch of this subject, not bearing directly on the clinical aspect of the case.

These demonstrations occupy three two-hour sessions weekly, each section of the class attending one exercise weekly throughout the year.

Post-Mortem Examinations.—Students of the fourth year are required to perform autopsies under the direction of the instructor in gross pathology, when they are made familiar with the technical procedures required in ordinary and in medico-legal cases.

Recitations.—One recitation weekly is required of each student throughout the third year.

Lectures.—A series of lectures on special topics in pathology is given to students of the third and fourth years. These topics have included:

The Mechanism of Immunity, the Etiology of Tumors, Cerebral Hemorrhage, Comparative Morphology of the Cerebral Cortex, etc. Attendance at these lectures is optional.

EXPERIMENTAL PATHOLOGY.

During the year 1903 definite plans were formed to facilitate experimental studies in the Department of Pathology. The direct object of the plans was to associate together a number of competent workers whose time should be devoted to the study of problems in medical science. Abundant space and modern facilities have been provided in the Loomis Laboratory for experimental work in cellular pathology, bacteriology, and physiological chemistry, and for micro-photography, and are available to approved applicants who desire to engage in this work under the direction of Professor Buxton. The members of this staff include also Dr. John C. Torrey, Dr. Philipp Shaffer, Dr. Oscar Teague, and assistants.

Since 1904 the work of the Huntington Fund for Cancer Research has been located in the Loomis Laboratory, under the direction of Professor Buxton and Dr. S. P. Beebe, assisted by Dr. Philipp Shaffer, Dr. Martha Tracey, Dr. Richard Weil, and others.

BACTERIOLOGY.

The laboratory course in bacteriology occupies three two-hour sessions each week for one-half of the second year—in all, ninety hours for each student. The student is first made familiar with the methods of disinfection, and is required to prepare the ordinary culture media. The work then proceeds to the methods of staining and examining bacteria; their artificial cultivation and the study of biological characters; the methods employed in the separation of species; the general relation of pathogenic bacteria to disease; and concludes with the biological analysis of air, water, soil, and milk. Cultures are made from the viscera of cases of the various infectious diseases, and the student is required to cultivate and identify the important pathogenic micro-organisms. The work is supplemented when necessary by the use of pure cultures, by the exhibition of anaërobic cultures, and to a limited extent by inoculation in animals.

An Advanced Course in bacteriology is offered to those students who have been able in the first year to attend the course required in the second year.

This course includes the cultivation of other pathogenic microorganisms, the separation of species, and the bacteriological examination of viscera secured at autopsies.

Advanced Courses and research.—The abundant facilities of the laboratory on the fourth floor of the new building can be offered to properly qualified students and practitioners of medicine who wish to pursue advanced courses of study on lines of original research, under the direction of special instructors.

SUMMARY.

	<i>First Year.</i>	<i>Second Year.</i>	<i>Third Year</i>	<i>Fourth Year.</i>
<i>Histology:</i>				
Recitations . . .	60 hours.	25 hours.		
Laboratory . . .	120 hours.	60 hours.		
<i>Embryology:</i>				
Laboratory . . .	30 hours.			
Lectures	15 hours.			
<i>Pathology:</i>				
Lectures		10 hours.	10 hours.	10 hours.
Laboratory . . .			180 hours.	
Recitations . . .			30 hours.	
<i>Gross Pathology:</i>				
Laboratory . . .		15 hours.	60 hours.	30 hours.
<i>Bacteriology:</i>				
Laboratory . . .		90 hours.		

Text-Books: Histology—Ferguson, *Text-Book of Histology*.

Pathology—Delafield and Prudden, *Pathological Anatomy and Histology*.

Bacteriology—Muir and Ritchie, *Manual of Bacteriology*; Park, *Bacteriology*.

Collateral Reading—Orth, *Pathological Diagnosis*; Ziegler, *General Pathology*; Sternberg, *Manual of Bacteriology*; Ewing, *Pathology of the Blood*; Minot, *Embryology*.

SPECIAL DEPARTMENTS OF MEDICINE AND SURGERY.

CORNELL UNIVERSITY MEDICAL COLLEGE.

NERVOUS DISEASES.

CHARLES L. DANA, M.D., *Professor of Clinical Medicine, Department
of Diseases of the Nervous System.*

Instructors,

JOSEPH FRAENKEL, M.D., J. RAMSAY HUNT, M.D.
LESLIE J. MEACHAM, M.D.

Assistants,

ROBERT M. DALEY, M.D., ALEXANDER S. LEVERTY, M.D.

The regular work consists of a preliminary series of lectures by Professor Dana, in which the general outline of the work for the year is given, with demonstrations of the general anatomy, general symptomatology, and methods of examination of the nervous system. During the rest of the term clinical lectures on nervous diseases are held weekly in the amphitheatre of Bellevue Hospital or at the college. Section work is given weekly to classes in the wards of Bellevue Hospital, and four times a week in the dispensary of the college. In this dispensary, section-work instruction is given in history-taking in the examination of patients, and in electro-therapeutics. In addition a special course of lectures on practical phases of neurology is given by Dr. Joseph Fraenkel.

It is considered of the greatest importance that the student of nervous diseases be thoroughly grounded in the anatomy and physiology of the nervous system, therefore courses in gross and microscopical anatomy of the nervous system are provided in the histological laboratory. Special students can also take courses on the pathology of the nervous system.

Thus the course of instruction aims to provide the student before he

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graduates with instruction in the microscopical anatomy of the nervous system, in its physiology and pathology, and also with practical clinical instruction in the amphitheatre, at the bedside, and in the dispensary.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures	5 hours.	
Clinics	20 hours.	20 hours.
Sections	15 hours.	5 hours.

Text-Book—Dana, *Diseases of the Nervous System and Psychiatry*.

Collateral Reading—Gower, *Diseases of the Brain and Spinal Cord*; works on nervous diseases by Dercum, Mills, Sachs, Starr; Obersteiner, *Anatomy of the Nervous System*.

PSYCHO-PATHOLOGY.

ADOLF MEYER, M.D., LL.D., *Professor of Clinical Medicine, Department of Psycho-pathology.*

Clinical Instructors,

AUGUST HOCH, M.D.,

GEORGE H. KIRBY, M.D.

The course is to cover the principal data and methods of modern psycho-pathology, the diagnosis and legal commitment of the insane, and the medico-legal problems of insanity.

It consists of five general lectures, eight two-hour clinics at the Manhattan State Hospital on Ward's Island, each followed in a few days by a one-hour review of the topic of the clinical demonstration, and two lectures on the practical issues, commitments and medico-legal principles.

Three to four hours of optional section work is given at Bellevue Hospital or in the college dispensary.

SUMMARY.

General lectures	7 hours.
Clinics	16 hours.
Reviews	8 hours.
Section work (optional)	3-4 hours.

Reference-Book—Kraepelin, *Clinical Psychiatry*

DISEASES OF CHILDREN.

JOSEPH E. WINTERS, M.D., *Professor of Clinical Medicine, Department of Diseases of Children.*

Clinical Instructors,

WALTER A. DUNCKEL, M.D.,

WILLIAM SHANNON, M.D.

Assistants,

SAMUEL M. EVANS, M.D.,

JOHN H. P. HODGSON, M.D.

This department will embrace clinical instruction and section teaching in all the important diseases of infancy and childhood.

There will be one clinical lecture each week in the college building, and clinical lectures in the Willard Parker Hospital on scarlet fever and diphtheria.

In connection with the dispensary of the Children's Department in the college building there is an amphitheatre for section teaching, and isolation rooms for contagious diseases, so that students have ample opportunity for the personal study of disease.

Two hours each week will be devoted to section teaching in the dispensary to the students of the fourth year.

Students will be required to examine sick children and discuss the diagnosis and treatment of patients assigned to them.

Special attention is given to the hygiene and feeding of infants; the digestive disorders of infants; the dietetics of childhood and the food disorders of infancy and childhood; the anatomical and physiological peculiarities of infancy and childhood; and the influence these peculiarities have on the manifestations of disease in children.

One of the distinguishing features of this department will be the instruction of each student in the art of diagnosis by the professor in charge.

There will be practical bedside illustrations of the management, care, and therapeutics of all the acute diseases of infancy and childhood.

In the clinical laboratory microscopical examinations will be made of secretions and excretions, of lesions of the mouth and throat, and of sections of anatomical lesions of the important diseases of childhood.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Clinics	30 hours.	30 hours.
Sections		10 hours.

Text-Book—Henry Ashby, *The Diseases of Children*, London, fifth ed., 1905; Rotch, *Pediatrics*.

Collateral Reading—Starr, *American Text-Book on the Diseases of Children*; Welch and Schomberg, *Acute Contagious Diseases*.

HYGIENE.

Instruction in many of the branches of hygiene and preventive medicine is a prominent feature in some of the courses pursued in the several departments of Chemistry, Bacteriology, Pathology, and Medicine.

The topics thus covered include the chemical and bacterial analysis of air, water, milk; the preservation and adulteration of foods; and the general diagnosis, control, and prevention of infectious diseases.

The more distinctive branches of hygiene and preventive medicine are presented in a course of lectures to third- and fourth-year students. Some of the topics thus considered are :

(1) The hygiene of dwellings, ventilation, sanitary plumbing, lighting, water supply, disposal of sewage, school hygiene, and municipal sanitation. Dr. Woodbury.

(2) The chemical problems relating to the collection, storage, and distribution of water supplies. Dr. Riggs.

(3) The relation of diseases of lower animals to those of man. Meat inspection. Milk inspection. Prof. Moore.

(4) Epidemiology, prophylaxis, and hygiene of transmissible diseases. Prof. Ewing.

Text-Books—Eghert, *Hygiene and Sanitation*; Bergey, *Text-book of Hygiene*; Notter, *Theory and Practice of Hygiene*.

GYNÆCOLOGY.

WILLIAM M. POLK, M.D., *Professor of Clinical Surgery, Department of Gynæcology.*

Instructors,

CHARLES C. BARROWS, M.D.,

GEORGE D. HAMLEN, M.D.,

GEORGE G. WARD, JR., M.D.,

LEROY BROWN, M.D.

Instruction in gynæcology is given by recitations, lectures, ward and class-room demonstrations, clinics, and laboratory demonstrations.

Five Lectures, upon topics of special interest and importance to the subject as a whole, will be given during the fourth year.

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Recitations are planned to cover the entire subject, and are held one hour a week during the fourth year of the course. In order that the instruction throughout the department may be as nearly in unison as possible, a synopsis of the subject-matter of each lesson is prepared by the instructor and amended and revised by the head of the department. This is presented to the student for comparison with his text-book, to which it is an addendum. This method insures the coöperation of the head of the department in the groundwork of his subject and enables him to keep in touch with each student until his graduation.

Class-room and Ward Demonstrations are given to sections of the fourth-year class twice a week throughout the year. This instruction includes the examination of patients by the students, who are thereby drilled in the methods of physical diagnosis as applied to the pelvis. When necessary the patients are anæsthetized.

The routine treatment appropriate to the various conditions found is demonstrated, the students assisting when possible. In this way, not only is familiarity acquired with normal conditions within the pelvis and the various departures from this state induced by disease, but opportunity is afforded to see and put in actual practice measures of relief and to watch the subsequent course and treatment of these cases.

Operations are performed three days every week at which the several sections are enabled to study the detail of every operation peculiar to this department.

A General Clinic is held once a week at which students selected in rotation are required to examine the patient, make a diagnosis, and suggest treatment. They are questioned before the class upon all these topics, as they relate to the case in hand, so as to determine the correctness of their conclusions. Should operation be called for, it is then performed.

Laboratory Demonstrations of secretions, discharges, and specimens obtained from patients who come under observation during this course are made to sections of the third-year class as a part of the course in clinical pathology.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		6 hours.
Recitations		30 hours.
Clinics	30 hours.	30 hours.
Sections		20 hours.

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Text-Book—Penrose, *Gynæcology*; Findley, *Diagnosis*.

Collateral Reading—Dudley, *Gynæcology*; Garrigues, *Diseases of Women*.

DISEASES OF THE GENITO-URINARY ORGANS.

SAMUEL ALEXANDER, M.D., *Professor of Clinical Surgery, Department of Diseases of the Genito-Urinary System.*

Clinical Instructor,

FRANCIS C. EDGERTON, M.D.

The course is required of students during the third and fourth years, and is designed to give instruction in diagnosis and treatment of the surgical diseases of the male genital and urinary organs and syphilis.

Lectures.—One lecture a week from the opening of the term to the first of January will be given by Professor Alexander at the college, introductory to the clinical courses, and upon syphilis.

Clinic.—A clinic will be given in the amphitheatre of Bellevue Hospital once each week after the first of January by Professor Alexander. At this clinic the principal operations upon the male urinary and genital organs will be performed before the class, and special attention will be given to the subject of diagnosis and post-operative management of cases. Attendance upon these clinics is required by students during the third and fourth years.

Section Teaching at the College Dispensary.—The third-year class will be divided into sections of small size, and instruction will be given by the Chief of Clinic and the instructors in the college dispensary. Special attention will be given in this course to the diagnosis and treatment of the venereal diseases and the use of special instruments.

The fourth-year class will be divided into sections of small size, and instruction will be given in the wards of Bellevue Hospital by Professor Alexander. This course will be devoted principally to the diseases of the urinary organs and to instruction in the use of special instruments and apparatus and the post-operative treatment of cases.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Clinics	18 hours.	18 hours.
Sections	15 hours.	10 hours.
Lectures		9 hours.

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Text-Books—White and Martin; Keyes.

Collateral Reading—Hyde and Montgomery; Keyes and Chetwood.

DERMATOLOGY.

GEORGE T. ELLIOTT, M.D., *Professor of Clinical Surgery, Department of Dermatology.*

Clinical Instructors,

JAMES C. JOHNSTON, M.D.,

HANS J. SCHWARTZ, M.D.

Instruction in Dermatology will be given by the Clinical Professor and his assistants. No teaching will be given didactically, but the cutaneous diseases will be demonstrated on the living subject. Abundance of material for such instruction is obtainable, and the student can thoroughly familiarize himself with the more common as well as with the rarer diseases of the skin by actual personal contact and observation. Attention is particularly paid to the diagnosis and the etiology of skin diseases, but their therapeutics also receive due consideration.

SUMMARY.

Fourth Year.

Sections 25 hours.

Text-Books—J. Nevins Hyde, *Dermatology*; H Stelwagon, *Diseases of the Skin*.

LARYNGOLOGY AND RHINOLOGY.

CHARLES H. KNIGHT, M.D., *Professor of Clinical Surgery, Department of Laryngology and Rhinology.*

Clinical Instructor,

JAMES E. NEWCOMB, M.D.

Assistants,

FRANKLIN T. BURKE, M.D.,

WALTER C. MONTGOMERY, M. D.,

CHARLES MACK, M.D.,

PERRY SCHOONMAKER, M.D.

Instruction in Laryngology and Rhinology is given by clinical lectures at the college by the Professor of the department. The subjects then considered are demonstrated to the fourth-year students by the

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instructor and by the assistants. The class is divided into sections, and each member is expected to examine patients and perform manipulations. The clinics are fully illustrated by plates and models, and, as far as possible, by clinical material.

SUMMARY.

	<i>Fourth Year.</i>
Lectures	8 hours.
Sections	15 hours.

Text-Book—Knight, *Diseases of the Nose and Throat.*

Collateral Reading—Grünwald, *Atlas of Diseases of the Larynx*;
Grünwald, *Atlas of Diseases of the Mouth, Pharynx, and Nose.*

OPHTHALMOLOGY.

CHARLES STEDMAN BULL, M.D., *Professor of Clinical Surgery, Department of Ophthalmology.*

Clinical Instructors,

ROBERT G. REESE, M.D.,

J. HERBERT CLAIBORNE, M.D.

Instruction in Ophthalmology consists in lectures at the college building once a week, during the months of October, November, and December, and in sectional teaching two hours a week at the college dispensary throughout the year. The weekly lectures at the college are didactic, and consider the subjects of the external or superficial diseases of the eye, the anomalies of the ocular muscles, and the deep lesions of the eye which are not susceptible of clinical demonstration. The sectional teaching at the college dispensary is devoted partly to clinical ophthalmology and the use of the ophthalmoscope, and partly to instruction in the errors of refraction and the rudiments of the fitting of lenses. Thus the entire field of ophthalmology is covered.

SUMMARY.

	<i>Fourth Year.</i>
Clinics	10 hours.
Sections	20 hours.

Text-Book—Noyes.

Collateral Reading—De Schweinitz, Swanzy, Jackson, Nettleship, Berry, May, Fuchs:

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OTOLOGY.

FREDERICK WHITING, M.D., *Professor of Clinical Surgery, Department of Otology.*

Clinical Instructor,
GEORGE B. MCAULIFFE, M.D.

Assistants,

EARLE CONNER, M.D.,
GEORGE W. KUNZ, M.D.,

H. E. COOK, M.D.,
NATHAN S. ROBERTS, M.D.

During the first third of the fourth year a systematic course of weekly lectures is given. These lectures are practical in character, including a consideration of the anatomy and physiology of the ear and the various methods of examination. Patients are shown to the class in order to familiarize the students with the symptoms and character of the more important diseases.

For clinical instruction in the dispensary, the fourth-year class is divided into sections. Each student receives practical instruction from Professor Whiting and his assistants in the examination of patients, the use of the otoscope, and the various methods of testing the hearing. The student is permitted to examine patients and, after a probationary period, to prescribe for them and thus gradually assume the duties of a clinical assistant. The students also have an opportunity of witnessing the more important operations in aural surgery, including intracranial complications at the New York Eye and Ear Infirmary.

SUMMARY.

	<i>Fourth Year.</i>
Clinics	9 hours.
Sections	15 hours.

Text-Book—Bacon, *On the Ear.*

Collateral Reading—Politzer, *Diseases of the Ear*; Macewen, *Pyogenic Infective Diseases of the Brain and Spinal Cord*; Whiting, *The Modern Mastoid Operation.*

ORTHOPÆDIC SURGERY.

NEWTON M. SHAFFER, M.D., *Professor of Clinical Surgery, Department of Orthopædic Surgery.*

Clinical Instructors,

P. HENRY FITZHUGH, M.D., JOHN JOSEPH NUTT, M.D.

Assistants,

PERCY WILLARD ROBERTS, M.D., DEAS MURPHY, M.D.

The course of study in the Orthopædic Department includes a stated clinical lecture once a week, with detailed demonstrations in sectional work twice a week during two months of the year.

During the regular clinical course especial attention is given to the early recognition of the deforming diseases of childhood, also to the symptomatology, pathology, and differential diagnosis of chronic and progressive deformities, including the mechanical and operative treatment.

In detail, the course consists of practical illustrations of methods of treatment, the apparatus used being thoroughly explained both in construction and in principle, attention being called to even minute points of construction and use. The operative side is fully dwelt upon, the indications for operative interference as an adjunct to the mechanical work being demonstrated. Ample clinical material is provided, and models of conventional forms of apparatus are placed at the disposal of students.

In the section and laboratory work the student is required to assist in the management of selected cases, to familiarize himself with the various methods of treatment, to construct the simpler forms of apparatus, to secure a practical knowledge of the details of construction of the more complicated instruments, and to familiarize himself with the pathological conditions existing in the deformities of childhood.

SUMMARY.

Fourth Year.

Clinics		10 hours.
Sections		10 hours.

Text-Book—Bradford and Lovett.

RADIOGRAPHY AND RADIO-THERAPY.

ALBERT C. GEYSER, M.D., *Instructor.*

This department is equipped with the most modern implements, coils, static machines, and high-frequency apparatus.

A large clinic furnishes abundant material for the demonstration of diagnosis, therapeutics, and the taking of radiographs. Students of the fourth-year class are taught in sections and given an opportunity to become thoroughly familiar with the various electrical agents.

SUMMARY.

	<i>Fourth Year.</i>
Sections	10 hours.

MEDICAL JURISPRUDENCE.

This subject is covered in the regular course of study by several departments and by special lectures. The responsibilities of the physician towards the insane and their relatives and the general public, and the criminal aspects of the mentally defective are discussed by Professor Meyer. In the course on Obstetrics Professor Edgar takes up the moral and legal side of rape, feigned and unconscious pregnancy, what constitutes a "live birth," feigned or unconscious delivery, injury to the fœtus during precipitate labor, post-mortem delivery and the diagnosis of recent delivery. Professor Witthaus in the teaching of Toxicology discusses both its medical and medico-legal relations, and gives considerable attention to the "expert" witness and his rights and obligations, and advises as to how he should conduct himself. Dr. Schultze, in addition to his regular course in Gross Pathology, demonstrates medico-legal autopsies and cases of homicide, suicide, accident and abortion. A lawyer considers in a separate course the matter of the right to practice medicine, its acquirement and the statutory regulations; also State and City Boards of Health and their powers together with the regulations as to contagious diseases. The contractual relation between the physician and his patient as well as the recovery of compensation, and the liability for "damages," malpractice and privileged communications are fully discussed.

SUMMARY OF THE PLAN OF INSTRUCTION.

The right is reserved to make amendments to this curriculum as experience may prove necessary.

The hours stated indicate the number of hours assigned to each student.

The total of hours devoted by each department to instruction is, of course, much in excess of these.

FIRST YEAR.

Anatomy.

Lectures, 1 hour weekly.....	30 hours.
Demonstrations, 1½ hours weekly.....	45 hours.
Recitations, 2 hours weekly.....	75 hours.
Dissection, 12 hours weekly, 16 to 20 weeks.....	192 to 230 hours.

Physiology.

Demonstrations, 4 hours weekly, 15 weeks.....	60 hours.
Recitations, 3 hours weekly, half term.....	45 hours.

Chemistry.

Recitations, 2 hours weekly.....	60 hours.
Laboratory, 4 hours weekly, 18 weeks.....	72 hours.
Laboratory, 2 hours weekly, 12 weeks.....	24 hours.

Physics.

Lectures, 3 hours weekly.....	90 hours.
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Histology.

Laboratory, 4 hours weekly.....	120 hours.
Recitations, 2 hours weekly.....	60 hours.

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Embryology.

Lectures, 1 hour weekly, 15 weeks.....	15 hours.
Laboratory, 2 hours weekly, 15 weeks.....	30 hours.

Electives.

Laboratory Pharmacology.
Physiological Chemistry.

These elective courses are open to certain advanced students, as described on page 40 of the Announcement.

In the course of the session one written review is held in the subjects recited upon. The papers are examined by the professors of the respective branches.

SECOND YEAR.

Anatomy.

Lectures, 2½ hours weekly.....	75 hours.
Demonstration Lectures, 1 hour weekly, 15 weeks.....	15 hours.
Demonstrations, 1½ hours weekly, 30 weeks.....	45 hours.
Recitations, 1 hour weekly.....	30 hours.
*Dissection, 10 hours weekly, 8 to 12 weeks.....	80 to 120 hours.

Physiology.

Demonstrations, 4 hours weekly, 15 weeks.....	60 hours.
Recitations, 4 hours weekly, half term.....	60 hours.

Organic and Physiological Chemistry.

Laboratory, 2 hours weekly, 18 weeks.....	36 hours.
Laboratory, 4 hours weekly, 12 weeks.....	48 hours.
Lectures, 2 hours weekly.....	60 hours.
Recitations, 1½ hours weekly.....	45 hours.

Pharmacology.

Laboratory, 6 hours weekly, 15 weeks.....	90 hours.
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Bacteriology.

Laboratory, 6 hours weekly, 15 weeks.....	90 hours.
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* Total Dissection required, 310 hours.

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Histology.

Laboratory, 2 hours weekly.....	60 hours.
Recitations, 1 hour weekly, 25 weeks.....	25 hours.

Pathology.

Lectures	10 hours.
Gross Pathology, 1 hour weekly for 15 weeks.....	15 hours.

Medicine.

Recitations, 1½ hours weekly.....	45 hours.
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Surgery.

Recitations, 2 hours weekly.....	60 hours.
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Obstetrics.

Recitations, 1 hour weekly.....	30 hours.
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Electives.

Manikin Course in Obstetrics.

Obstetrical Clinic.

The conditions under which certain students may avail themselves of these electives are stated on page 40 of the Announcement.

THIRD YEAR.

Medicine.

Lectures, 2 hours weekly, 10 weeks.....	20 hours.
Clinics, 1 hour weekly.....	30 hours.
Clinics, 1 hour weekly, 16 weeks.....	16 hours.
Recitations, 2 hours weekly.....	60 hours.
Section Work, 3 hours weekly, 10 weeks.....	30 hours.
Section Work, 1 hour weekly, 5 weeks.....	5 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.
Section Work, 1 hour weekly, 5 weeks.....	5 hours.

Surgery.

Lectures, 2 hours weekly, 20 weeks.....	40 hours.
Clinics, 1 hour weekly, 18 weeks.....	18 hours.
Clinics, 1 hour weekly.....	30 hours.
Clinics, 1 hour weekly, 8 weeks.....	8 hours.
Clinics, 1 hour weekly.....	30 hours.

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Recitations, 2 hours weekly.....	60 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.
Section Work, 2 hours weekly, 5 weeks.....	10 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.

Therapeutics.

Lectures, 1 hour weekly.....	30 hours.
Lectures, 1 hour weekly, 17 weeks.....	17 hours.
Clinics, 1 hour weekly.....	30 hours.
Section Work, 1 hour weekly, 5 weeks.....	5 hours.

Materia Medica.

Recitations, 2 hours weekly.....	60 hours.
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Pathology.

Lectures	10 hours.
Laboratory, 6 hours weekly.....	180 hours.
Recitations, 1 hour weekly.....	30 hours.

Gross Pathology.

Laboratory, 2 hours weekly.....	60 hours.
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Clinical Pathology.

Laboratory, 2 hours weekly.....	60 hours.
Recitations, 1 hour weekly, 6 weeks.....	6 hours.

Obstetrics.

Lectures, 1 hour weekly, 30 weeks.....	30 hours.
Clinics, 1 hour weekly, 15 weeks.....	15 hours.
Recitations, 1 hour weekly.....	30 hours.
Section Work (manikin), 3 hours weekly, 5 weeks.....	15 hours.

Gynæcology.

Clinics, 1 hour weekly.....	30 hours.
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Toxicology.

Lectures, 1 hour weekly, 20 weeks.....	20 hours.
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Diseases of Children.

Clinics, 1 hour weekly.....	30 hours.
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Genito-Urinary Surgery.

Clinics, 1 hour weekly, 18 weeks.....	18 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.

Neurology.

Lectures	5 hours.
Clinics, 1 hour weekly, 20 weeks.....	20 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.

FOURTH YEAR.

Medicine.

Lectures, 1 hour weekly, 10 weeks.....	10 hours.
Clinics, 1 hour weekly.....	30 hours.
Clinics, 1 hour weekly.....	30 hours.
Recitations, 1 hour weekly.....	30 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.
Section Work, 1 hour weekly, 5 weeks.....	5 hours.
Section Work, 4 hours weekly, 5 weeks.....	20 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.
Section Work, 2 hours weekly, 4 weeks.....	8 hours.
Section Work, 4 hours weekly, 5 weeks.....	20 hours.

Surgery.

Lectures, 2 hours, 20 weeks.....	40 hours.
Clinics, 1 hour weekly, 18 weeks.....	18 hours.
Clinics, 1 hour weekly, 8 weeks.....	8 hours.
Clinics, 2 hours weekly.....	60 hours.
Section Work, 1 hour weekly, 5 weeks.....	5 hours.
Section Work, 2 hours weekly, 5 weeks.....	10 hours.
Section Work, 2 hours weekly, 5 weeks.....	10 hours.
Operative Surgery, 6 hours weekly, 5 weeks.....	30 hours.
Recitations, 1 hour weekly.....	30 hours.

Therapeutics.

Lectures, 1 hour weekly.....	30 hours.
Clinics, 1 hour weekly.....	30 hours.
Recitations, 1 hour weekly.....	30 hours.
Section Work, 1 hour weekly, 5 weeks.....	5 hours.
Section Work, 1 hour weekly, 5 weeks.....	5 hours.

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Obstetrics.

Clinics, 1 hour weekly, 15 weeks..... 15 hours.

Gynæcology.

Lectures, 1 hour weekly, 6 weeks..... 6 hours.

Clinics, 1 hour weekly..... 30 hours.

Section Work, 4 hours weekly, 5 weeks..... 20 hours.

Recitations, 1 hour weekly..... 30 hours.

Pathology.

Lectures 10 hours.

Gross Pathology.

Autopsies, 6 hours weekly, 5 weeks..... 30 hours.

Diseases of Children.

Clinics, 1 hour weekly..... 30 hours.

Section Work, 2 hours weekly, 5 weeks..... 10 hours.

Genito-Urinary Surgery.

Lectures 9 hours.

Clinics, 1 hour weekly, 18 weeks..... 18 hours.

Section Work, 2 hours weekly, 5 weeks..... 10 hours.

Neurology.

Clinics, 1 hour weekly, 20 weeks..... 20 hours.

Section Work, 1 hour weekly, 5 weeks..... 5 hours.

Psycho-pathology.

General lectures..... 7 hours.

Clinics 16 hours.

Reviews 8 hours.

Section Work (optional).....3-4 hours.

Dermatology.

Section Work, 5 hours weekly, 5 weeks..... 25 hours.

Laryngology and Rhinology.

Lectures, 1 hour weekly, 8 weeks..... 8 hours.

Section Work, 3 hours weekly, 5 weeks..... 15 hours.

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Ophthalmology.

Lectures, 1 hour weekly, 10 weeks.....	10 hours.
Section Work, 4 hours weekly, 5 weeks.....	20 hours.

Otology.

Clinics, 1 hour weekly, 9 weeks.....	9 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.

Orthopædic Surgery.

Clinics, 1 hour weekly, 10 weeks.....	10 hours.
Section Work, 2 hours weekly, 5 weeks.....	10 hours.

Radiography.

Section Work, 2 hours weekly, 3 weeks.....	10 hours.
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EXAMINATIONS.

REQUIREMENTS FOR ADVANCEMENT IN COURSE.

Students are advanced in course from one year to the next upon passing examinations in the work of that year, but examinations in major or minor subjects may, at the discretion of the Head of the Department, include all the work previously covered in the year or years preceding the examinations in question. There is, however, no unnecessary repetition of subjects taught from year to year. Students who have not succeeded in passing all their examinations will be allowed to enter upon the next year's studies, provided they pass examinations in the subjects failed in at the beginning of the session.

Examinations for advancement in course, graduation, and admission to advanced standing are held at the close of the year. In each laboratory course extending through a part of the year only, the examination is held at the close of the course.

Examinations for conditioned students and those desiring admission to advanced standing, who have not taken the spring examinations, are held during the week preceding the opening of the college.

The subjects examined upon are divided into major and minor subjects, and a standing of 75 per cent. is required to pass.

The minor subjects embrace laboratory courses and those in which instruction is given by recitations only.

Subjects of Examination for Admission to the Second Year.

Major Subjects..Anatomy (except the nervous system, viscera, and organs of special sense).

Physics.

Inorganic Chemistry (including laboratory work).

Physiology (except the nervous system, embryology, and organs of special sense).

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Minor Subjects..Histology (except the nervous system and organs of special sense).

Embryology.

Conditions allowed (at the spring examinations): 1 Major and 1 Minor; or 2 Minor subjects.

NOTE 1. In each of those branches in which recitations are held throughout the year, there shall be a written review conducted by the instructors and supervised by the professor in charge of the department, and also a final written review conducted by the professor himself at the close of the year. The written reviews conducted by the instructors shall be held as soon as possible after the return from the Christmas recess, and shall count as a single recitation, the object being to ascertain the knowledge acquired by the student.

NOTE 2. *All conditions must be successfully passed before entrance into the next succeeding year will be allowed.*

Subjects of Examination for Admission to the Third Year.

Major Subjects..Anatomy.

Organic and Physiological Chemistry.

Physiology.

Minor Subjects..Medicine.

Surgery.

Obstetrics.

Bacteriology.

Normal Histology (central nervous system and organs of special sense).

Pharmacology.

Laboratory Organic Chemistry.

Conditions allowed: 1 Major and 1 Minor; or 2 Minor subjects.

(See Notes 1 and 2 above.)

Subjects of Examination for Admission to the Fourth Year.

Major Subjects..Materia Medica.

Pathology.

Minor Subjects..Obstetrics.

Medicine.

Surgery.

Toxicology.

Clinical Pathology.

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Pediatrics. }
Neurology. } Clinical Paper.
Gross Pathology.

Conditions allowed: 1 Major and 1 Minor; or 2 Minor.

(See Notes 1 and 2, page 85.)

Subjects of Examination for Graduation at the End of the Fourth Year.

Major Subjects.. Medicine.

Surgery.

Therapeutics.

Obstetrics.

Gynæcology.

Minor Subjects.. Hygiene.

Ophthalmology.

Neurology.

Laryngology and Rhinology.

Orthopædics.

Pediatrics.

Psycho-pathology.

Otology.

Dermatology.

Genito-Urinary Diseases.

The examinations in the major subjects are allowed two hours, and in the minor subjects one hour each.

If any student fails to pass in not more than one major, or in two minor subjects, an examination may be allowed within two weeks, and if the candidate is then successful the degree will be conferred at the later Commencement at Ithaca.

If the candidate fails to pass in any subject at this second examination, the work of the fourth year must be repeated.

Requirements for Graduation.

1. Candidates for the degree of doctor of medicine must have studied medicine for four full years in an accredited medical college, and the fourth year at least must have been spent in the Cornell University Medical College.

2. Candidates must present satisfactory evidence of good moral character and of being not less than twenty-one years of age.

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3. Candidates must file with the Secretary of the Faculty the Cornell Regents' medical-student certificate as evidence of having complied with the requirements for admission.

4. Candidates must have dissected at least seven parts in anatomy (see page 44). They must, further, have taken the regular course of two weeks in practical obstetrics, and a certificate covering this course must be filed at the Secretary's office before registration for the final examinations, which begin about the middle of May.

5. In addition to the yearly examinations above specified for advancement in course, candidates must pass at the end of the fourth year examinations in medicine, surgery, therapeutics, obstetrics, and gynecology, and the special branches which are specified on page 86.

6. Candidates rejected at the final examination will not be reexamined until after having repeated their fourth year of study.

Before being readmitted to the fourth year the candidate must pass a satisfactory examination in anatomy, physiology, chemistry and physics, and materia medica.

7. The degree will not be conferred upon any candidate who absents himself from the public Commencement without the special permission of the Faculty.

8. The Faculty reserves the right to terminate the connection of any student with the institution *at any time* on the ground of what they may deem moral or mental unfitness for the profession, or improper conduct while connected with the College.

Final Examination in the Subjects of the First and Second Years.

A recent law permits students to take part of their examinations for the license to practice medicine in this State at the end of the second year.

For full text of the law see page 33, this catalogue.

REQUIREMENTS FOR LICENSE TO PRACTICE MEDICINE IN THE STATE OF NEW YORK.

All requirements for admission should be filed at least one week before examination.—They are as follows:

1. Evidence that applicant is more than twenty-one years of age (Form 1).

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2. Certificate of moral character from not less than two physicians in good standing (Form 1).

3. Evidence that applicant has the general education required preliminary to receiving the degree of bachelor or doctor of medicine in this State (medical-student certificate. See examination handbook).

4. Evidence that applicant has studied medicine not less than four full school years of at least nine months each, in four different calendar years, in a medical school registered as maintaining at the time a satisfactory standard. New York medical schools and New York medical students shall not be discriminated against by the registration of any medical school out of the State, whose minimum graduation standard is less than that fixed by statute for New York medical schools.

First exemption: "The Regents may in their discretion accept as the equivalent for any part of the third and fourth requirements, evidence of five or more years' practice of medicine, provided that such substitution be specified in the license."

5. Evidence that applicant "has received the degree of bachelor or doctor of medicine from some registered medical school, or a diploma or license conferring full right to practice medicine in some foreign country" (Form 2 of original credentials).

6. The candidate must pass examinations in anatomy, physiology and hygiene, chemistry, surgery, obstetrics, pathology and diagnosis, therapeutics, practice, and materia medica. The questions "shall be the same for all candidates, except that in therapeutics, practice, and materia medica all the questions submitted to any candidate shall be chosen from those prepared by the board selected by that candidate, and shall be in harmony with the tenets of that school as determined by its State Board of Medical Examiners."

Second exemption: "Applicants examined and licensed by other State examining boards registered by the Regents as maintaining standards not lower than those provided by this article, and applicants who matriculated in a New York State medical school before June 5, 1890, and who received the degree of M.D. from a registered medical school before August 1, 1895, may, without further examination, on payment of \$10 to the Regents, and on submitting such evidence as they may require, receive from them an indorsement of their licenses or diplomas, conferring all rights and privileges of a Regents' license issued after examination."

7. A fee of \$25 payable in advance.

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Examinations for license to practice medicine in this State will be held as follows:

	1907.	1908.	1909.	1910.
Winter	Jan. 29-Feb. 1	Feb. 4-7	Feb. 2-5	Feb. 1-4
Spring	May 21-24	May 19-22	May 18-21	May 24-27
Summer	June 25-28	June 23-26	June 22-25	June 28-July 1
Autumn	Oct. 1-4	Sept. 22-25	Sept. 21-24	Sept. 27-30

Places.

New York, Albany, Syracuse, Buffalo.

DIPLOMAS OF LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND MEMBERSHIP OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Graduates of the Cornell University Medical College are admitted to the final examination for the diploma of Licentiate of the Royal College of Physicians of London and Membership of the Royal College of Surgeons of England, upon presenting proper certificates that certain conditions applicable to the foreign universities and colleges which are recognized by the examining board have been complied with.

Further information may be obtained from the Secretary of the Board (Mr. F. G. Hallet) at the Examination Hall, Victoria Embankment, London, W. C.

Prizes.

In commemoration of John Metcalfe Polk, an Instructor in this College, who graduated from the Medical Department of Cornell University on June 7th, 1899, and died on March 29th, 1904, an annual prize of \$500 will be presented at each Commencement to the members of the Graduating Class who have completed the full course of study in Cornell University Medical College.

This prize will be awarded as follows:

To the student having the highest standing.....\$300
To the student having the second highest standing....\$125
To the student having the third highest standing..... \$75

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Hospital Appointments.

The students and graduates of the Cornell University Medical College are entitled to compete on equal terms with those of other colleges for positions on the resident staff of Bellevue and the other hospitals of the city.

Some of these hospitals are: The City, Harlem, Gouverneur, New York, St. Luke's, Presbyterian, St. Vincent's, St. Francis', Mount Sinai, German and Hudson Street hospitals, New York Eye and Ear Infirmary, and the hospitals in Brooklyn and Jersey City, Newark, Paterson, etc.

The requirements, the times of examination, and the period of service differ. The details can be learned by application, written or in person, to the superintendents or to the secretaries of the medical boards of the various hospitals.

Special Courses.

The Medical Department will continue the System of Special Courses which has proved of advantage.

The courses are designed primarily for advanced students or for workers in specialized lines of research or for post-graduates. They are scheduled to begin at various times, and to continue about six weeks. These courses include different portions of the subjects of normal histology; clinical, gross, and histological pathology; bacteriology, chemistry, anatomy, and operative surgery.

A pamphlet giving full details can be obtained by application to the Secretary of the College.

Suggestion.

It would be to the advantage of students if they would register a few days in advance of the opening exercises, secure boarding-places, and purchase books, so that their studies may not be interrupted in the beginning. The Secretary's office is open every day after September, from 10 A.M. to 5 P.M.

TEXT-BOOKS.

As a rule, only the latest editions of text-books should be purchased.

Anatomy—Text-Book, Gerrish, second edition, \$6.50; Reference Works, Morris, \$6.00; Gray, \$5.50; Quain, \$25.20; Woolsey, *Surgical*

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Anatomy, \$5.00; Haynes, *Manual of Anatomy*, \$2.50; Cunningham, *Text-Book of Anatomy*; Toldt, *Atlas of Human Anatomy*, \$18.00.

Bacteriology—Muir and Ritchie, *Manual of Bacteriology*, \$3.75.

Chemistry—Witthaus, *Manual of Chemistry*, sixth edition, \$3.50; Wolf, *Laboratory Handbook*, \$1.25; Ganot, *Physics*, \$4.00; Riggs, *Laboratory Chemistry*, \$1.00.

Dermatology—J. Nevins Hyde, \$4.50; H. Radcliffe Crocker, third edition, \$5.00; H. Stelwagon, \$6.00.

Diseases of Children—Henry Ashby, M.D., *The Diseases of Children*, fifth edition; Starr, *An American Text-Book of the Diseases of Children*, \$7.00; Rotch, *Pediatrics*, \$6.00; Welch and Schomberg, *Acute Contagious Diseases*.

Genito-Urinary—White and Martin, \$6.00; Hyde and Montgomery, \$4.00; Keyes and Chetwood, \$2.75.

Gynæcology—Penrose, \$3.75; Dudley, \$5.00; Garrigues, *Diseases of Women*, \$4.50; Findley, *Diagnosis*, \$4.75.

Histology—Ferguson, *Text-Book of Histology*, \$4.00; Bohm, Davidoff, and Huber, *Text-Book of Histology*, \$3.50.

Hygiene—Egbert, *Hygiene and Sanitation*, \$2.25; Notter, *Theory and Practice of Hygiene*, \$7.00.

Laryngology and Rhinology—Knight, *Diseases of the Nose and Throat*, \$3.00; Grünwald, *Atlas of Diseases of the Larynx*, \$2.50; Grünwald, *Atlas of Diseases of the Mouth, Pharynx, and Nose*, \$3.00.

Materia Medica and Therapeutics—Butler, *Text-Book of Materia Medica, Therapeutics, and Pharmacology*, \$4.00; Coleman, *Syllabus of Materia Medica*, \$1.90; Hare, *Practical Therapeutics*, \$4.00; Thompson, *Practical Dietetics*, \$5.00; Wilson, *American Text-Book of Applied Therapeutics*, \$7.00; Hatcher, *A Text-Book of Materia Medica*, \$2.00.

Medicine—Osler, *Practice of Medicine*, \$5.00; Polk, *Physical Diagnosis*, \$1.50; Salinger-Kalteyer, *Modern Medicine*, \$4.00; Musser, *Medical Diagnosis*, \$6.00; Thompson, *Practical Medicine*, \$5.00; for reference, Loomis-Thompson, *American System of Practical Medicine*, \$24.00.

Nervous Diseases—Dana, *Diseases of the Nervous System and Psychiatry*, \$4.00; Gower, *Diseases of the Brain and the Spinal Cord*, \$8.00; Dercum, \$6.00; Obersteiner, *Anatomy of the Nervous System*, \$5.50.

Obstetrics—Edgar, *Practice of Obstetrics*, \$6.00.

Ophthalmology—Noyes, \$5.00; De Schweinitz, \$4.00; Swanzy, \$2.50; Jackson, \$2.50; Nettleship, \$3.00; Fuchs, \$5.00.

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Orthopædic Surgery—Bradford and Lovett, \$4.50.

Otology—Bacon, *On the Ear*, \$2.25; Politzer, *Diseases of the Ear*, \$7.00; Macewen, *Pyogenic Infective Diseases of the Brain and Spinal Cord*, \$4.00.

Pathology—Delafield and Prudden, *Pathological Anatomy and Histology*, \$5.00; Orth, *Pathological Diagnosis* (Trans. of Sydenham Society); Ziegler, *General Pathology*, \$5.00.

Clinical Diagnosis—Wood's *Chemical and Microscopical Diagnosis*; V. Jaksch, \$6.50; Ewing, *Pathology of the Blood*, \$3.50; Emerson, *Clinical Diagnosis*.

Physiology—Kirke's *Handbook of Physiology*, twentieth edition, \$3.00; Flint, *Handbook of Physiology*, fifth edition, 1905; Stewart, \$3.75; Foster, \$3.60; Schäffer, \$18.00; Howell, —.

Psychopathology—Dana, *Nervous Diseases and Psychiatry*, \$4.00; Patton, *Psychiatry*, \$4.00; Kraepelin, *Clinical Psychiatry*, \$3.50.

Surgery—Tillmann, 3 vols., \$15.00; *American Text-Book*, \$7.00; Parks, *Surgery*, \$6.00; Stimson, *Fractures and Dislocations*, \$5.00; Stimson, *Operative Surgery*, \$3.00; Dennis, *System of Surgery*, \$6.00 per volume.

Gould's, *Student's Medical Dictionary*, \$2.50.

Dissecting Cases—\$2.00 to \$5.00.

Text-books, etc., may be obtained from the Clerk at the College.

ITHACA DIVISION



STIMSON HALL

FACULTY OF MEDICINE AT ITHACA.

BURT GREEN WILDER, B.S., M.D.,

Professor of Neurology and Vertebrate Zoology.

EDWARD LEAMINGTON NICHOLS, B.S., Ph.D.,

Professor of Physics.

SIMON HENRY GAGE, B.S.,

Professor of Histology and Embryology.

VERANUS ALVA MOORE, B.S., M.D.,

Professor of Comparative Pathology and Bacteriology.

LOUIS MUNROE DENNIS, Ph.B., B.S.,

Professor of Inorganic Chemistry.

WILLIAM RIDGELY ORNDORFF, A.B., Ph.D.,

Professor of Organic and Physiological Chemistry.

ERNEST GEORGE MERRITT, M.E.,

Professor of Physics.

ABRAM TUCKER KERR, B.S., M.D.,

Professor of Anatomy.

GEORGE SYLVANUS MOLER, A.B., B.M.E.,

Assistant Professor of Physics.

BENJAMIN FREEMAN KINGSBURY, Ph.D., M.D.,

Assistant Professor of Physiology.

EMILE MONNIN CHAMOT, B.S., Ph.D.,

Assistant Professor of Sanitary Chemistry and Toxicology.

JOHN SANDFORD SHEARER, B.S., Ph.D.,

Assistant Professor of Physics.

ERNEST BLAKER, B.S., Ph.D.,

Assistant Professor of Physics.

FACULTY OF MEDICINE AT ITHACA.

ARTHUR WESLEY BROWNE, M.S., Ph.D.,
Assistant Professor of Inorganic and Analytical Chemistry.

HUGH DANIEL REED, B.S., Ph.D.,
Assistant Professor of Neurology and Vertebrate Zoölogy.

EUGENE BAKER, B.S., M.D.,
Lecturer on Obstetrics and Practice of Medicine.

MARTIN BUEL TINKER, B.S., M.D.,
Lecturer on Surgery.

SAMUEL HOWARD BURNETT, A.B., M.S., D.V.M.,
Instructor in Comparative Pathology and Bacteriology.

RALPH CUTHBERT SNOWDON, A.B.,
Instructor in Chemistry.

THOMAS DELBRIDGE, A.B.,
Instructor in Chemistry.

MELVIN DRESBACH, M.S., M.D.,
Instructor in Physiology and Pharmacology.

GEORGE COOKE ROBERTSON, A.B.,
Instructor in Chemistry.

JOSEPH H. HATHAWAY, A.M., M.D.,
Instructor in Anatomy.

WALTER JENNINGS TAYLOR, D.V.M.,
Instructor in Pathology and Bacteriology.

CASSIUS WAY, A.B.,
Assistant in Bacteriology.

EFFIE ALBERTA READ, A.B., A.M.,
Assistant in Histology and Embryology.

WESLEY MANNING BALDWIN, A.B.,
Assistant Demonstrator in Anatomy.

ALBERT HAZEN WRIGHT, A.B., A.M.,
Assistant in Vertebrate Zoölogy and Neurology.

BURTON JUSTUS RAY, A.B.,
Assistant in Chemistry.

FACULTY OF MEDICINE AT ITHACA.

JOHN ALEXANDER BLACK, A.B.,

Assistant in Chemistry.

HENRY GOODHAM BURNHAM, A.B.,

Assistant in Chemistry.

JESSE RANDOLPH PAWLING, A.B., A.M.,

Assistant in Pharmacology and Physiology.

FRED F. SHETTERLY, A.B.,

Assistant in Chemistry.

HOWARD WADSWORTH GILLETT, A.B.,

Assistant in Chemistry.

JAMES MALCOM SWAINE, M.S. in Agr.,

Assistant in Vertebrate Zoölogy and Neurology.

HOWARD WELCH, A.B.,

Assistant in Histology and Embryology.

MILTON J. JOHNSON, M.D.,

Assistant Demonstrator of Anatomy.

HARRY LANGDON ROCKWOOD,

Assistant in Anatomy.

FRANK PERRY GOODWIN, M.D.,

Assistant Demonstrator of Anatomy.

ROSCOE CONKLIN WILSON, Ph. C., M.D.,

Assistant in Materia Medica and Pharmacology.

ALBERT CYRUS DURAND, A.B.,

Assistant in Pharmacology and Physiology.

BENONI AUSTIN PLACE, A.M.,

Assistant in Physiology and Histology and Embryology.

OSHUA FERRIS DARLING, A.B.,

Assistant in Chemistry.

FREDERICK WILLIAM STORRS, B.S., M.S.,

Assistant in Chemistry.

HARRY I. ANDREWS, M.D.,

Assistant Demonstrator of Anatomy and Assistant in Histology and Embryology.

FACULTY OF MEDICINE AT ITHACA.

FLOYD ROBBINS WRIGHT, A.B., M.D.,

Assistant Demonstrator of Anatomy.

ARTHUR AUGUSTUS ALLEN,

Assistant in Vertebrate Zoölogy and Neurology.

ABRAM T. KERR, B.S., M.D.,

Secretary of the Medical Faculty at Ithaca.

INSTRUCTION AT ITHACA

DURING THE FIRST TWO YEARS OF THE COURSE.

CALENDAR FOR ITHACA.

First Term, 1907-1908.

September 24th, Tuesday.—Academic year begins; matriculation of new students; University scholarship examinations begin.
September 25th, Wednesday.—Matriculation of new students.
September 26th, Thursday.—Registration of matriculated students.
September 27th, Friday.—Instruction begins in all departments of the University at Ithaca. President's annual address to students at 12 M.
December 20th, Friday.—Instruction ends.
January 3d, Friday.—Instruction resumed.
January 11th, Saturday.—Founder's Day.
January 29th, Wednesday.—First term closes.

Second Term.

February 1st, Saturday.—Registration for the second term.
March 27th, Friday.—Instruction ends.
April 7th, Tuesday.—Instruction resumed.
June 11th, Thursday.—Instruction ends.
June 18th, Thursday.—Fortieth annual Commencement.

General Statement.

From its very foundation Cornell University has offered special courses for students preparing for the study of Medicine; first in the Natural History course, and later also in a special two-year Medical Preparatory course. In 1898, the Medical College was established in New York City with a four-years' course. At the same time the work of the first two years was duplicated at the University in Ithaca, since many of the fundamental scientific subjects of which this part of the course mainly consists were already provided for in the long-established

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departments of Botany, Zoölogy, Comparative Anatomy, Physics, Chemistry, Physiology, Histology, Embryology, and Bacteriology. The courses in these departments were modified where necessary and additional courses were added so as to make the work at Ithaca fully equivalent to the first two years in New York City.

Among the facilities of the University of special value to the Medical College may be mentioned the museums of Vertebrate and Invertebrate Zoölogy, including Entomology and Comparative Anatomy, of Agriculture, of Botany, of Geology, and of Veterinary Medicine. The University Library, with its 328,394 bound volumes, 48,000 pamphlets, and over 2,000 current periodicals and transactions, is as freely open to medical students as to other University students.

Through the generosity of the late Dean Sage, of Albany, the University has been enabled to erect a building especially designed for anatomy, histology, embryology, and physiology. The building is constructed of Ohio sandstone. The general form is that of an E, 157 feet long and 50 feet wide, with wings 40 feet square.

In the cellar are the cold-storage, embalming, and cremating rooms and store-rooms, and a large room forty feet square for aquaria, projection, etc.

In the basement are the ventilating and cold-storage machinery, a large lecture room, a recitation room, and an office for the departments of surgery, medicine, and obstetrics, besides the lower part of the large amphitheatre.

On the first floor are located the cloak rooms for men and women, college office, library, faculty room, office, and private laboratory for histology, two recitation rooms, upper part of the large amphitheatre, and assembly room.

The second floor is devoted to the departments of histology and physiology, each with a large general laboratory, a research laboratory, preparation rooms, and the private laboratories for the staff of instruction.

The third floor consists of the general and special dissecting rooms, study rooms, and amphitheatre, besides rooms for the staff.

The attic is utilized for photography, macerating the skeletons, and for storage.

The air in the building is constantly changed by forced ventilation. The lighting is especially good in all the rooms, as shown by the picture opposite page 92.

DEPARTMENTS, METHODS, AND FACILITIES.

ANATOMY.

ABRAM T. KERR, B.S., M.D., *Professor.*

JOSEPH H. HATHAWAY, A.M., M.D., *Instructor.*

WESLEY M. BALDWIN, A.B., *Assistant Demonstrator.*

MILTON J. JOHNSON, M.D., *Assistant Demonstrator.*

FRANK P. GOODWIN, A.B., M.D., *Assistant Demonstrator.*

HARRY I. ANDREWS, M.D., *Assistant Demonstrator.*

FLOYD R. WRIGHT, A.B., M.D., *Assistant Demonstrator.*

HARRY L. ROCKWOOD, *Assistant.*

Anatomy is given in both the first and second years and is mostly concentrated into the first term. This gives a large amount of continuous time for the subject, which consists mainly of practical work in the laboratory. Each student is independent of the others, and those with special training or ability are encouraged to do more than the required work. Personal quizzes and demonstrations are given upon each stage of the work. In addition to this, there are frequent recitations and demonstrations to small sections of the class. The students are encouraged to make careful notes and drawings of the conditions which they find in their specimens. To facilitate the drawings, outline record charts are furnished. Clay also is provided for modelling bones and other parts. The department is well equipped with models and special preparations. These are for use in the demonstrations and also for the personal use of students in the laboratory.

There is plenty of dissecting material, which is embalmed and kept in cold storage so as to be ready for use when needed. In the two years the student is required to make at least one complete satisfactory dissection of the human body. The work is distributed as follows:

In the first year, thirty-two and a half hours per week are given to Anatomy. A complete disarticulate skeleton is loaned to each group of two students. The vertebræ and ribs and the bones of the upper extremity are studied first, and when these are finished the dissection of

the upper extremity is begun. Upon completing the study of this first part, the bones and then the soft parts of the head, except the brain, are considered. The lower extremity is studied in a similar manner. As a preparation for the second term's work in Histology and Physiology an elementary course of demonstrations on the gross anatomy of the viscera is given near the end of the term.

In the second year, first term, twenty-five hours a week are devoted to laboratory work. The thoracic and abdominal viscera and central nervous system are dissected. The work on the viscera is given in the first part of the term, and the dissection is accompanied by special recitations and demonstrations to small groups. The gross anatomy of the central nervous system comes in the latter part of the term. In the second term of the second year, five demonstrations or recitations each week on topographical and regional anatomy are given to small sections of the class. In these the work of the preceding two years is reviewed, dissections are shown, and the practical bearing of Anatomy on Medicine and Surgery is particularly emphasized.

Those who satisfactorily complete the required work and others properly qualified may do advanced or research work.

1. Anatomy.—Laboratory work with section demonstrations and recitations, thirty-two and a half actual hours weekly from September 27th to January 29th: (*a*) The upper extremity, 4 credits; (*b*) the head and neck, $5\frac{1}{2}$ credits; (*c*) the lower extremity, $3\frac{1}{2}$ credits. Course 1 is required of first-year medical students. Professor Kerr, Instructor Hathaway, Assistant Demonstrators Baldwin, Andrews, Wright, and Rockwood.

2. Anatomy.—Laboratory work with section demonstrations and recitations twenty-two and a half actual hours weekly. September 27th to January 29th: (*a*) Abdominal and pelvic walls and viscera; (*b*) thoracic walls and viscera. Professor Kerr, Instructor Hathaway, Assistant Demonstrators Baldwin, Johnson, and Goodwin. Course 2 is required of second-year students in Medicine.

3. Topographical and Regional Anatomy.—Section demonstrations five hours weekly. February 1st to June 11th. Required of second-year students in Medicine. Drs. Hathaway and Wright, and Mr. Baldwin.

4. Thoracic and Abdominal Viscera.—Section demonstrations two and a half hours weekly. Required of second-year students in Medicine. September to February. Dr. Hathaway.

5. Eye, Ear, Nose, Pharynx, Larynx, and Other Special Organs.—Demonstrations, February 1st to June 11th. Hours to be arranged. Elective. Dr. Hathaway.

6. Advanced and Research Work.—Laboratory work. Elective. Eight or more actual hours per week. Professor Kerr and Instructors.

7. Anatomy Recitations.—Upper extremity, head and neck; lower extremity. September 27th to January 29th. Hours to be arranged. Mr. Baldwin.

8. Structure, Development, and Physiology of the Nervous System and the Organs of Sense.—Credit, three or five hours. Second year. Professors Gage, Kerr, and Kingsbury. The course consists of three parts: (a) Gross Anatomy, with special reference to Medicine and Surgery, Dr. Kerr; (b) Histology and Development, Professor Gage; (c) Physiology, Dr. Kingsbury. The instruction in each part consists of laboratory work, demonstrations or lectures, and recitations. The Gross Anatomy is given during the last month of the first term, the Histology and Development during the first five and a half weeks of the second term, and is immediately followed by the Physiology in the next nine weeks.

9. Anatomy Recitations.—Abdominal, pelvic, and thoracic viscera. September 27th to January 29th. Hours to be arranged. Mr. Baldwin.

HISTOLOGY AND EMBRYOLOGY.

SIMON HENRY GAGE, B.S., *Professor.*

EFFIE ALBERTA READ, A.B., *Assistant.*

HARRY I. ANDREWS, M.D., *Assistant.*

FLOYD ROBINS WRIGHT, A.B., M.D., *Assistant*

HOWARD WELCH, A.B., *Assistant.*

BENONI AUSTIN PLACE, A.B., A.M., *Assistant.*

As indicated by the following courses, this department offers elementary and advanced instruction in the theory and use of the microscope and its accessories, in photo-micrography, in vertebrate histology, and vertebrate embryology; and opportunities for research in all of these subjects.

The material equipment consists of a good supply of modern microscopes, while camera-lucidas, polariscopes, micro-spectroscopes, photo-

micrographic cameras, microtomes and other special apparatus are in sufficient numbers to give each student opportunity for personally learning to use them, and for applying them to any special study in which they are called for. Two projection microscopes are available for class demonstrations and for making the drawings used in wax-plate reconstruction. The collection of histologic and embryologic specimens is extensive and constantly increasing.

The rooms for the use of the department are on the first and second floors of Stimson Hall. They are almost perfectly lighted and consist of a large general laboratory, an advanced laboratory, a preparation room, and two laboratories for the instructing staff, where also special demonstrations of difficult subjects are given to small groups of students.

The aim of the department is to bring the student into direct contact with the truths of nature, and hence, while there are demonstration lectures to give broad and general views, there is a large amount of laboratory work in which the facts are learned at first hand, and the methods and manipulations necessary for acquiring the facts are practiced by each student. It is recognized that less ground can be covered in a given time in this way, but it is believed, and experience has confirmed the belief, that the intellectual independence and power to acquire knowledge direct from nature which is gained by this personal work is of far higher value than the facts and theories that might be learned in the same time from books and lectures alone, or from specimens prepared by some other individual.

This lake region with its rich and varied fauna is especially favorable for investigation in the histology and embryology of all the main groups of vertebrates; and the proximity of the abattoirs in the city makes it possible to obtain material for the study of the development of the sheep, cow, and pig. The clinic and veterinary department supply material for the embryology of the cat and dog, so that the opportunities for research upon the development of the domestic animals are excellent. Every encouragement is given for the fullest utilization of these opportunities.

1. Microscopy, Histology, and Embryology.—Second half-year. Credit, 8 University hours. The instruction is given in two recitations, twelve hours of laboratory work, and one or more lecture-demonstrations, weekly during the second half-year. Professor Gage and Assistants Read, Andrews, Welch, and Place.

Microscopy.—The aim is to give a working knowledge of the theory

and use of the microscope and its accessories, methods of mounting microscopical specimens, etc. It serves as a basis for all subsequent work of the department. First two weeks.

Histology.—This includes the study of the fine anatomy of man and of the domestic animals, and also the fundamental methods of histologic investigation and demonstration. This work continues seven weeks.

Embryology.—This deals with the elements and methods of embryology in the amphibia, in the domestic animals, especially the chick and the pig, and in man. This work continues seven weeks.

2. Vertebrate Histology and Embryology.—Second term. Credit, 4 University hours (ten actual hours of work per week). This course consists of laboratory work, lectures, demonstrations, and recitations. It is designed for students of biology and of medicine. Special attention is given to the elements of the subject and to methods of preparation, including serial sectioning and modeling. Professor Gage and Miss Read.

4. Advanced Work in Histology and Embryology.—Laboratory, eight or more actual hours per week with seminary throughout the year. This course is designed for those preparing theses for the baccalaureate or advanced degrees and for those wishing to undertake special investigations in histology and embryology. Special instruction will be given in the theory and manipulation of the more important and difficult accessories of the microscope, *e.g.*, the micro-spectroscope, the micro-polariscope, and the apertometer. The use and application of the projection microscope and of photo-micrographic apparatus will be learned by each student, in abundant practical experiments. Professor Gage.

Course 4 is open only to those who have taken Course 1 or 2, or its equivalent in some other university. Drawing (Course 12c, in Free-hand Drawing, or its equivalent) and a reading knowledge of French and German are indispensable for the most successful work in this course.

Subjects for theses should be decided upon as early as possible so that material in suitable stages of development and physiologic activity may be prepared.

7. Seminary.—Hours to be arranged. At the seminary, there will be presented reports of special methods and the results of advanced work. Professor Gage.

8. Structure, Development, and Physiology of the Nervous System and the Organs of Sense.—Credit, three or five hours. Second year. Professors Gage, Kerr, and Kingsbury. The course consists of three parts:—(a) Gross Anatomy, with special reference to Medicine and Surgery, Dr. Kerr; (b) Histology and Development, Professor Gage; (c) Physiology, Dr. Kingsbury. The instruction in each part consists of laboratory work, demonstrations or lectures, and recitations. The Gross Anatomy is given during the last month of the first term, the Histology and Development during the first five and a half weeks of the second term, and is immediately followed by the Physiology in the next nine weeks.

Course 1 is required of first-year students; course 8 of second-year students in Medicine.

NOTE.—For the work of this department the student will find a knowledge of Latin and Greek of the greatest advantage. A year's study of Latin, three to five recitations per week, and of Greek, Goodell's Greek in English, or Coy's Greek for beginners, would represent the minimum amount needed. For all courses, the ability to draw well freehand and a good reading knowledge of French and German are desirable, and for research work almost indispensable.

VERTEBRATE ZOÖLOGY AND NEUROLOGY.

BURT GREEN WILDER, B.S., M.D., *Professor.*

HUGH DANIEL REED, B.S., PH.D., *Assistant Professor.*

ALBERT HAZEN WRIGHT, A.B., A.M., *Assistant.*

JAMES MALCOLM SWAINE, M.S. in Agr., *Assistant.*

ARTHUR AUGUSTUS ALLEN, A.B., *Assistant.*

3. Morphology of the Brain (lectures only). Second term. Credit, 1 hour. One lecture, Thursday at 11. There are considered (a) the various types of vertebrate brain, beginning with that of the acanth shark (*Squalus acanthias*); (b) the development and morphology of the human brain; (c) its resemblances and peculiarities; (d) the cerebral fissures as criteria of zoölogic or racial affinity, as indexes of physical or mental quality or power, and as boundaries of functional areas. For the illustration of this course there are numerous diagrams representing actual preparations of the brains of man, apes, and other vertebrates. Specimens and models are freely employed; see Course 3a.

Members of the class should arrange to remain during at least part of the hour following the lecture in order to examine the specimens. Professor Wilder.

3a. Morphology of the Brain (practicums only). Second term. Credit, 1 hour. One practicum in two sections at hours to be arranged on Friday, and on Saturdays, 10-12:30. Beginning with the brain of the acanth shark, so far as practicable the forms examined parallel and supplement those discussed in Course 3. The actual dissections of mammalian brains are done on those of the cat and sheep, but each member of the class is enabled to study and draw museum specimens from many groups, including monkeys, apes and men, prepared to exhibit special features. The neurologic division of the museum comprises about 1,600 specimens distributed as follows:—Human adults and children, 430; human embryo, fetal and at birth, 118; apes and monkeys, 292; other mammals, 420; other vertebrates, 240. Professor Wilder, Mr. Swaine and Mr. Allen.

PHYSIOLOGY.

BENJAMIN FREEMAN KINGSBURY, Ph.D., M.D., *Assistant Professor.*

MELVIN DRESBACH, M.S., M.D., *Instructor.*

JESSIE RANDOLPH PAWLING, A.M., *Assistant.*

BENONI AUSTIN PLACE, A.B., *Assistant.*

ALBERT CYRUS DURAND, A.B., *Assistant*

The work in the department is carried on by means of lectures, demonstrations, laboratory work, and recitations. The laboratory course is intended to introduce the student to methods of laboratory work in Physiology, to have him become acquainted with certain fundamental facts at first hand and to learn to draw conclusions from the facts. The part of Physiology so taken up in the laboratory covers the Physiology of muscle, nerve, heart and circulation, blood (in part), eye, and central nervous system. Special stress is laid on the points and apparatus of importance in later clinical work.

The recitations cover the entire field of Physiology. Numerous demonstrations are given in the laboratory to supplement the lecture-demonstrations and student experiments.

The lectures are intended to unify the work of the Department.

As occasion demands, quizzes or demonstrations may be substituted for the lectures.

The physiology of the central nervous system and organs of sense is given in the second year, after the student has had preparatory work on the anatomy and histology.

The physiology of digestion, excretion, and metabolism is likewise taken up in the second year, after the student has had the work in physiological chemistry. The last half of the work of the second year (Course 4) is taken up by a review covering the entire field of physiology, preparing the student for the final and State Board examinations.

For courses open to students in the College of Arts and Sciences, see Courses 3, 5, 7 and 9.

1. Physiology of Movement, Sensation, Circulation, and Respiration.—Credit, 8 University hours. Five three-hour periods per week. The course includes laboratory work accompanied by two or more recitations or quizzes, one or more demonstrations, and one or more lectures. Required of first-year students of medicine. Second half-year. Assistant Professor Kingsbury and Assistants.

3. Elementary Human Physiology.—First term. Three hours. Lectures or demonstrations upon the Physiology of the body. Designed for students who expect to teach physiology in the secondary schools, or as an introductory course for students of the Biological Sciences. Assistant Professor Kingsbury.

4. The Physiology of Digestion, Absorption, Metabolism, and Excretion.—Two recitations or demonstrations per week in assigned sections. Required of second-year students of medicine. Credit, 2 hours. Second half-year. Instructor Dresbach.

5. Experimental Physiology.—First term. Three University hours. Laboratory work with a weekly laboratory talk or quiz. An arrangement of experiments intended to meet the needs of students of the Biological Sciences. Assistant Professor Kingsbury and Assistant Place.

7. Research and Advanced Work in Physiology.—Eight or more actual hours per week. Assistant Professor Kingsbury and Instructor Dresbach.

8. Structure, Development, and Physiology of the Nervous System and the Organs of Sense.—Credit, three or five hours. Second year. Professors Gage, Kerr, and Kingsbury. The course consists of three parts: (a) Gross Anatomy, with special reference to Medicine

and Surgery, Dr. Kerr; (b) Histology and Development, Professor Gage; (c) Physiology, Dr. Kingsbury. The instruction in each part consists of laboratory work, demonstrations or lectures, and recitations. The Gross Anatomy is given during the last month of the first term, the Histology and Development during the first five and a half weeks of the second term, and is immediately followed by the Physiology in the next nine weeks.

9. Advanced Experimental Physiology.—Two or more University hours per week. Five or more actual hours per week of work in the laboratory. Designed for students who wish to specialize in Physiology. Assistant Professor Kingsbury and Instructors.

Course 1 is required of first-year and Courses 4 and 8 of second-year students of medicine.

Course 3 should be preceded or accompanied by Course 4 or 2 in Vertebrate Zoölogy. It may with advantage be preceded or followed by Course 2 or 3 in Histology and Embryology.

Course 5 may be taken with or preceded by Course 3 or its equivalent.

Course 9 must be preceded by Course 1 or Courses 3 and 5, or their equivalents.

For courses in Comparative Physiology, see University Register.

MATERIA MEDICA AND PHARMACOLOGY.

BENJAMIN FREEMAN KINGSBURY, Ph.D., M.D., *Assistant Professor.*

MELVIN DRESBACH, M.S., M.D., *Instructor.*

ROSCOE CONKLIN WILSON, Ph.C., M.D., *Assistant.*

ALBERT CYRUS DURAND, A.B., *Assistant.*

PHARMACOLOGY AND MATERIA MEDICA.

The three sides of the subject of Pharmacology are presented in three separate courses, Materia Medica, Pharmacy, and Pharmacology in the narrower sense, or the Physiological Action of Drugs.

The Materia Medica includes a study of the crude drugs, their source, nature and properties, the pharmaceutical preparations, the forms for administration and prescription-writing. The course in Pharmacy consists of laboratory work in which the student makes pharmaceutical

preparations covering the processes for the extraction of crude drugs, and the forms for administration. Although the work is pharmaceutical, the aim of the course is to have the student become familiar at first hand with the composition, chemical and physical properties of the important medicinal preparations, and the emphasis is pharmacological. In the laboratory work upon the physiological action of drugs, each student determines the exact action, as far as possible, of the most important drugs on (a) the whole animal, (b) the various organs, (c) the tissues. The more difficult experiments are assigned to groups of students who demonstrate their results to the other members of the class.

The laboratory is well fitted for research work in pharmacology, and all efforts in the direction of advanced work will be encouraged.

1. Materia Medica.—Two demonstrations, lectures, or recitations weekly. Second term. Dr. Wilson.

2. Pharmacy.—Laboratory work, two hours weekly. In sections. Second term. Dr. Wilson and Mr. Durand.

3. The Physiological Action of Drugs.—Laboratory with occasional lectures or demonstrations, three hours weekly. First term. Instructor Dresbach and Assistant.

4. Research and Special Pharmacology.—Laboratory work. This may consist of either (a) selected experiments on the action of drugs, or (b) research work along special lines. Five or more hours per week. Assistant Professor Kingsbury and Instructor Dresbach.

For courses in Comparative Materia Medica and Pharmacology, see University Register.

PHYSICS.

EDWARD LEAMINGTON NICHOLS, B.S., Ph.D., *Professor.*

ERNEST GEORGE MERRITT, M.E., *Professor.*

GEORGE SYLVANUS MOLER, A.B., B.M.E., *Assistant Professor.*

JOHN SANFORD SHEARER, B.S., Ph.D., *Assistant Professor.*

ERNEST BLAKER, B.S., Ph.D., *Assistant Professor.*

The required instruction in physics is by means of lectures throughout one half year. In these lectures the general laws of mechanics and heat, electricity and magnetism, and sound and light are presented. The very large collection of lecture-room apparatus possessed by the

department makes it possible to give experimental demonstrations of all important phenomena. The arrangements for experimental work are most complete. Ordinary illuminating gas, acetylene, oxygen and hydrogen, compressed air, water and steam, blast and vacuum are within easy reach, and electric currents from alternating and direct current dynamos and from storage batteries are available.

The required course in physics for medical students consists of four lectures a week for one term, and the reading of a text-book. Note-books prepared by members of the class are read and graded at frequent intervals. A longer course, consisting of four lectures a week for one term, followed by four recitations a week, and one afternoon in the laboratory for one year, is likewise open to medical students, and all those who can find the time to do so, are urged to take this course in place of the required work mentioned above. It should be chosen in preference to the latter by all who wish to prepare themselves for advanced work in the biological sciences. The lectures in this course are supplemented by thorough drill upon the principles of the science, and this, together with the laboratory practice, affords opportunity for a much more adequate knowledge than can be obtained from any course that consists solely of lectures.

The department offers a course in practical photography (Physics, 18; 2 hours either term), consisting of lectures and laboratory practice. This course is open to students of medicine under the conditions stated upon page 173 of the University Register.

1. Elementary Physics.—Four lectures weekly, with demonstrations, for one term. Required of first-year students in Medicine. Professor Nichols, Merritt, or Shearer.

For additional courses in Physics, see University Register.

CHEMISTRY.

LOUIS MUNROE DENNIS, Ph.B., B.S.,

Professor of Inorganic Chemistry.

WILLIAM RIDGELY ORNDORFF, A.B., Ph.D.,

Professor of Organic and Physiological Chemistry.

EMILE MONNIN CHAMOT, B.S., Ph.D.,

Assistant Professor of Sanitary Chemistry and Toxicology.

ARTHUR WESLEY BROWNE, M.S., Ph.D.,

Assistant Professor of Inorganic and Analytical Chemistry.

Instructors in Chemistry.

RALPH CUTHBERT SNOWDON, A.B.,

THOMAS G. DELBRIDGE, A.B.,

GEORGE COOKE ROBERTSON, A.B.,

Assistants in Chemistry.

HENRY GORDON BURNHAM, A.B.,

FREDERICK WILLIAM STORRS, B.S., M.S.,

BURTON JUSTUS RAY, A.B.,

HORACE WADSWORTH GILLET, A.B.,

JOSHUA FERRIS DARLING, A.B.,

JOHN A. BLACK, A.B.,

FRED F. SHETTERLY, A.B.

Inorganic Chemistry.—The elements of Inorganic Chemistry are taught by lectures, laboratory work, and recitations. The lectures are profusely illustrated by experiments and lantern projection, and while presenting the fundamental concepts of chemical theory, are also largely descriptive in character. Experiments illustrating the principles discussed in the text-book are performed in the laboratory by each student.

Qualitative Analysis.—The qualitative analysis begins with the study of such reactions of the commoner elements and their compounds as are used in their detection. This is followed by the practical application of the knowledge thus gained to the analysis of unknown substances, both in the solid form and in solution. The work is accompanied by thorough drill in the writing of chemical equations.

Organic Chemistry, or the Chemistry of the Compounds of Carbon.—In this course the study of the typical compounds of carbon, their properties, reactions, and relations to one another, is taken up, especial attention being given to those organic substances that are of physiological importance. The course consists of lectures and recitations, supplemented by frequent written examinations. The lectures are fully illustrated by experiments, specimens of the compounds considered, and charts.

Toxicology.—This course is intended to serve as an introduction to the methods employed for the separation and identification of the com-

mon poisons, inorganic and organic. Special attention is given to the identification of poisons when present in organic matter, such as animal excretions and tissues, medicines, etc. This course also includes the identity tests for a few synthetic remedies.

Physiological Chemistry.—The work in this course comprises the study of the chemistry of the proteids, carbohydrates, and fats, and of the compounds found in the animal body which are of physiological and pathological importance. The method of instruction is by lectures, recitations, and laboratory work, with frequent written reviews. In the laboratory the student separates from the various animal fluids and organs the chemical compounds which they contain, studies their properties, reactions, and products of decomposition, and thus familiarizes himself with the methods of isolation and identification of these products.

The above courses in Chemistry are required of all students in medicine. Other advanced courses are open to properly qualified students in medicine, and especial facilities for research work in chemistry are at their disposal.

1. Introductory Inorganic Chemistry.—Three lectures, one recitation and five hours of laboratory work, weekly. First half-year. Professor Dennis and Assistant Professor Browne, Messrs. Burnham, Darling, Shetterly, and —.

8. Qualitative Analysis.—One lecture and five hours of laboratory work, weekly. Second half-year till April 24th. Mr. Snowdon and Mr. Storrs.

81. Toxicology.—One lecture and five hours' laboratory work weekly. Second half-year after April 24th. Assistant Professor Chamot and Messrs. Robertson and Gillett.

32. Elementary Organic Chemistry.—Two hours' lectures and written reviews. Second half-year. Mr. Delbridge.

40. Physiological Chemistry.—Two hours' lectures or recitations and written reviews. First half-year. Mr. Delbridge.

41. Physiological Chemistry.—Seven and one-half hours' laboratory work weekly. First half-year. Mr. Delbridge, Mr. Black and Mr. Ray.

Courses 1, 8, 81, and 32 are required in the first year, and Courses 40 and 41 in the second year of the medical course.

For additional courses in Chemistry, see University Register.

BACTERIOLOGY.

VERANUS ALVA MOORE, B.S., M.D., *Professor.*

SAMUEL HOWARD BURNETT, A.B., M.S., D.V.M., *Instructor.*

WALTER JENNINGS TAYLOR, D.V.M., *Instructor.*

CASSIUS WAY, A.B., *Assistant.*

The instruction in Bacteriology is given by means of lectures, recitations, and laboratory work. The bacteriological laboratories are well supplied with the best modern apparatus. The student will, under proper supervision, prepare culture media, make cultures, and study the morphology of bacteria in both the fresh (living) condition and in stained cover-glass preparations. In fact, all of the technique necessary for a practical working knowledge in bacteriology will be carefully covered. The more important species of pathogenic bacteria will be studied. The special methods which are necessary for diagnosing such diseases as tuberculosis, anthrax, glanders, and diphtheria will receive careful attention. Disinfection, sterilization, the means by which pathogenic bacteria are disseminated, protective inoculation, and other kindred subjects will be considered.

43. Bacteriology.—Two lectures and ten hours' laboratory work each week. Second half-year. Required of second-year medical students. Professor Moore, Instructor Taylor and Mr. Way.

44. Research in Bacteriology.—Laboratory work with lectures and seminary throughout the year. Professor Moore and Dr. Taylor. The course is designed for those wishing to undertake original investigation in Bacteriology preparatory to practical work in bacteriological lines, such as exists in health department laboratories. This course is open to students who have taken Course 43 or its equivalent in some other university. Elementary chemistry and a reading knowledge of French and German are indispensable for successful work in this course.

GENERAL PATHOLOGY.

VERANUS ALVA MOORE, B.S., M.D., *Professor.*

SAMUEL HOWARD BURNETT, A.B., M.S., D.V.M., *Instructor.*

WALTER JENNINGS TAYLOR, D.V.M., *Instructor.*

CASSIUS WAY, A.B., *Assistant.*

The course in Pathology consists of lectures, recitations, and laboratory work in pathological histology. The student will also be given

instruction in describing gross pathological specimens, but the major part of the work in the laboratory will consist in studying sections of diseased tissue and making drawings from the same. In this course it is expected that the student will become familiar with the terms used in morbid anatomy, together with a definite knowledge of the more important changes found in inflammation and the various forms of infiltrations and degenerations.

40. Pathology.—Two lectures or recitations and six hours' laboratory work each week. First term to Christmas vacation. Professor Moore, Instructors Burnett and Taylor. This course is open to students who have had Course 1 in Microscopy.

45. Research in Pathology.—Laboratory work throughout the year. Professor Moore and Instructor Burnett. This course is open to students who have taken Course 40 and have taken or are taking Course 43, or the equivalent in some other university.

SURGERY.

MARTIN BUEL TINKER, B.S., M.D., *Lecturer on Surgery.*

Four hours weekly, second half year, recitations, demonstrations and occasional lectures. The course is given to small sections, and is intended to familiarize the student with the principles of General Surgery and Surgical Pathology. Demonstrations are used whenever possible in teaching such subjects as Surgical Bacteriology, the histological changes in wound repair and the general principles of diagnosis and treatment of surgical diseases and injuries. Having in mind the present great importance of ability to pass examinations as well as with the aim of teaching systematic and concise arrangement and expression, frequent written exercises are given. Recitations are adopted as the principal method of instruction with the belief that for the average student information is best assimilated and retained when acquired by personal effort. Lectures are given whenever they seem likely to be helpful in supplementing other methods of instruction.

1. Surgery.—Recitations, demonstrations or lectures. Four class exercises weekly in small sections. Dr. Tinker.

MEDICINE.

EUGENE BAKER, B.S., M.D., *Lecturer on Medicine.*

No didactic lectures are delivered, their place being taken by recitations from a standard text-book.

Recitations.—The study of medicine proper is begun with systematic recitations from *Modern Medicine*, by Salinger and Kaltiger. In these recitations the nomenclature, etiology, pathology, and symptomatology of typical cases of diseases are considered, the question of treatment not being taken up until the Junior year in New York.

1. Medicine.—Two recitations weekly. Second half-year. Required of second-year students in medicine. Dr. Baker.

OBSTETRICS.

EUGENE BAKER, B.S., M.D., *Lecturer on Obstetrics.*

Instruction in obstetrics consists mainly of recitations from a standard text-book, these recitations covering the anatomy of the internal genitalia and pelvis, ovulation, menstruation, signs of pregnancy, the physiology, mechanism, and clinical course of normal labor, and the care of mother and child during the puerperium. Whenever necessary, these recitations will be illustrated by plates, casts, and demonstrations upon the obstetric manikin, etc.

1. Obstetrics.—Two recitations weekly. Second half-year. Required of second-year students in medicine. Dr. Baker.

SCHEDULE AND SUMMARIZED STATEMENT.

In this schedule the Counts or University hours are given on the following basis: One recitation or lecture weekly for one term or half-year gives a credit of one; for laboratory work it requires two and one-half actual hours weekly for a term or half a year to secure a credit of one.

SCHEDULE OF REQUIRED COURSES.

<i>First Year.</i>									
FIRST TERM.									
<i>Subject.</i>							<i>No. of Course.</i>	<i>Hours of Credit.</i>	<i>Actual Hours per Week.</i>
Anatomy							I	13	32½
Chemistry							I	6	9
Physics							I	4	4
								—	—
								23	45½
SECOND TERM.									
Histology							I	8	15
Physiology							I	8	15
Qual. Chem. Anal.							8	2	} 6
Toxicology							8I	I	
Organic Chemistry							32	2	2
								—	—
								2I	38
<i>Second Year.</i>									
FIRST TERM.									
Anatomy							2	9	22½
Anatomy							4	I	2½
Physiological Chemistry							40	2	2
Physiological Chemistry Lab.							4I	3	7½
Pathology							40	3	8
Physiological Action of Drugs							3	I	3
Nervous System, Gross Anatomy							8	2	5
								—	—
								2I	50½

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SECOND TERM.

<i>Subject.</i>	<i>No. of Course.</i>	<i>Hours of Credit.</i>	<i>Actual Hours per Week.</i>
Nervous System, Histology, and Physi- ology	8	2	2
Physiology Recitations	4	2	2
Neurology	3	2	3½
Anatomy	3	2	5
Bacteriology	43	6	12
Materia Medica	1	2	6
Pharmacy	2	1	2
Medicine	1	2	2
Surgery	1	4	4
Obstetrics	1	2	2
		25	40½

Junior Year.—For subjects, see pages 70 to 81, as given in New York City.

Senior Year.—For subjects, see pages 81, 82, as given in New York City.

SUMMARY OF REQUIRED COURSES.

FIRST YEAR.

1. Anatomy.—Laboratory work with section demonstrations and recitations, thirty-two and a half actual hours weekly. First half-year. Professor Kerr, Instructor Hathaway, Assistant Demonstrators Baldwin, Andrews, Wright, and Rockwood.

1. Introductory Inorganic Chemistry.—Three lectures, one recitation, and five hours of laboratory work weekly. First half-year. Professor Dennis and Assistant Professor Browne, Messrs. Burnham, Darling, Shetterly, and ———.

1. Elementary Physics.—Four lectures, with demonstrations weekly, first half the year. Professor Nichols, Merritt, or Shearer.

1. Microscopy, Histology, and Embryology.—Second half-year. Credit, 8 University hours. Two recitations, twelve hours of laboratory work, and one or more lecture-demonstrations weekly during the

second half-year. Professor Gage, Assistants Read, Andrews, Welch, and Place.

1. Physiology of Movement, Sensation, Circulation, and Respiration.—Credit, 8 University hours. Five three-hour periods per week. The course includes laboratory work accompanied by two or more recitations or quizzes, one or more demonstrations, and one or more lectures. Second half-year. Assistant Professor Kingsbury and Assistants.

8. Qualitative Analysis.—One lecture and five hours of laboratory weekly. Second half-year till April 22d. Mr. Snowdon and Mr. Storrs.

81. Toxicology.—One lecture and five hours of laboratory work weekly. Second half-year after April 24th. Assistant Professor Chamot and Messrs. Robertson and Gillett.

32. Elementary Organic Chemistry.—Two lectures weekly. Second half-year. Mr. Delbridge.

SECOND YEAR.

2. Anatomy.—Laboratory work with section demonstrations and recitations twenty-two and a half actual hours weekly. First half-year. Professor Kerr, Instructors Hathaway, Assistant Demonstrators Baldwin, Johnson, and Goodwin.

4. Anatomy, Thoracic and Abdominal Viscera.—Section demonstrations two and a half hours weekly. First half-year. Dr. Hathaway.

40. Physiological Chemistry.—Two lectures or recitations weekly. First half-year. Mr. Delbridge.

41. Physiological Chemistry Laboratory.—Seven and a half hours' laboratory work weekly. First half-year. Mr. Delbridge and Mr. Black and Mr. Ray.

40. Pathology.—Two lectures or recitations and six hours' laboratory work each week. First term to Christmas vacation. Professor Moore, and Instructors Burnett and White.

3. The Physiological Action of Drugs.—Laboratory with occasional lectures or demonstrations, three hours weekly. First term. Instructor Dresbach and Assistant ———.

8. Structure, Development, and Physiology of the Nervous System and Organs of Sense.—Credit 3 or 5 hours. Second year. The gross anatomy is given during the last month of the first term. The histology and development during the first five and a half weeks

of the second term, and is immediately followed by the physiology in the next nine weeks. Professors Gage, Kerr, and Kingsbury.

4. Physiology, Recitations and Demonstrations.—Digestion, Absorption, Metabolism, and Excretion. Two hours a week. Second half-year. In assigned sections. Instructor Dresbach.

3. Neurology.—One lecture weekly. Second half-year. Professor Wilder. Those who do not elect this course must take additional work in Course 8.

3. Topographical and Regional Anatomy.—Section demonstrations five hours weekly. February to June. Drs. Hathaway and Wright, and Mr. Baldwin.

43. Bacteriology.—Two lectures and ten hours' laboratory work each week. Second half-year. Professor Moore, Instructor Taylor, and Mr. Way.

1. Materia Medica.—Two demonstrations, lectures, or recitations weekly. Second term. Dr. Wilson.

2. Pharmacy.—Laboratory work, two hours weekly. In sections. Second term. Dr. Wilson and Mr. Durand.

1. Medicine.—Two recitations weekly. Second half-year. Dr. Baker.

1. Surgery.—Recitations, demonstrations, or lectures. Four hours in small sections. Second half-year. Dr. Tinker.

1. Obstetrics.—Two recitations weekly. Second half-year. Dr. Baker.

THE A.B. AND M.D. DEGREES.

As a liberal education in the Arts and Sciences is of great advantage to students of Medicine, all who can are urged to precede their medical studies by a college course. A student who takes the academic work in the College of Arts and Sciences of Cornell University will be permitted to elect, as the Fourth Year of his A.B. Course, a year's work in the Medical College. He may then take his fifth year of work—the second of the medical course—either in Ithaca or New York, but he must take the last two years of the medical course in New York. In this way he will obtain the A.B. degree at the end of four years and the M.D. at the end of seven years of study. This is possible because the first two years of the medical course in New York are offered in duplicate at the University in Ithaca.

RECOMMENDED COURSE IN ARTS FOR MEDICAL STUDENTS.

The work in the College of Arts and Sciences is largely elective. The Medical Faculty, however, recommends that students who intend to take the work in the Medical College should elect the following curriculum:

FIRST YEAR—ARTS.

<i>Subject.</i>	<i>Course No.</i>	<i>1st Term Hours.</i>	<i>2d Term Hours.</i>
English or History,		3	3
*Mathematics,	6	3	3
†Foreign Language,		3	3
Chemistry, Inorganic	1	6	
Chemistry, Qualitative Anal.,	8		2
Physics,	1		4
Invertebrate Zoölogy,	1	2	
Vertebrate Zoölogy,	2	2	
Invertebrate Morphology,	2		3
		19	18

In addition to the above, a student must take the required physical training.

* Those who at entrance offer Advanced Mathematics should take other work in its place. † Students should have a reading knowledge of French and German.

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SECOND YEAR—ARTS.

<i>Subject.</i>	<i>Course No.</i>	<i>1st Term Hours.</i>	<i>2d Term Hours.</i>
Foreign Language,		3	3
Physics, Recitation,	6	4	
Physics, Laboratory,	10		2
Botany,	1 and 2	3	3
Anatomic Methods,	4	3	
Psychology and Logic,	1	3	3
Neurology,	3		2
Elective,		2-4	2-4

In addition to the above, a student must take the required physical training.

THIRD YEAR—ARTS.

Organic Chemistry,	30	6	6
Physiology,	5	3	
Histology and Embryology,	2		5
Elective,		8-9	8-9

The Faculty recommend that the electives be selected from among the following:

	<i>Course No.</i>	<i>1st Term Hours.</i>	<i>2d Term Hours.</i>
Invertebrate Zoölogy,	3		2 or 3
Comparative Anatomy,	5		3
Advanced Neurology,	7		2 +
Systematic Vert. Zoölogy,	6	3	3
Advanced Physiology,	9	2 +	
Advanced Histology and Embryology,	4	3 +	
Psychology, Laboratory,	2	3	3
Photography,	18	2 or	2
Foods, Beverages, etc.,	70	2	
Potable Water,	75		2
*Food Analysis,	71	3	
*Water Analysis,	76		3
English,			
Philosophy,			
History and Political Science.†			

* Must have Quantitative Analysis first.

† Especially courses 41 and 55.

FOURTH YEAR—ARTS.

FIRST YEAR—MEDICAL.

<i>Subject.</i>	<i>Course No.</i>	<i>1st Term Hours.</i>	<i>2d Term Hours.</i>
Anatomy,	I	13	
Physiological Chemistry,	40 and 41	5	
Histology,	I		8
Physiology,	I		8
Toxicology,	81		I
		—	—
		18	17

Students who have taken the above course and received the A.B. degree will then take the work of the 2d, 3d, and 4th years in the Medical College.

The Secretary of the Medical College will be glad to confer with students in the College of Arts and Sciences who later expect to enter the Medical College.

He will be especially glad to consult with those students who wish to modify the above curriculum.

OPTIONAL FIVE-YEAR MEDICAL COURSE.

FOR STUDENTS WHO HAVE SATISFIED THE A.B. ENTRANCE REQUIREMENTS.

All who can do so are urged to take the seven-year Arts-Medical Course outlined above and thus secure the two degrees, A.B. and M.D. For those who cannot afford the time for that course the Medical

Those students who at entrance offer one modern language should elect the other. Those who offer French and German and Mathematics should elect other subjects in place of this work.

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Faculty have provided an optional five-year Medical Course outlined below :

FIRST YEAR.

<i>Subject.</i>	<i>Course No.</i>	<i>1st Term Hours.</i>	<i>2d Term Hours.</i>
Chemistry,	1	6	
Chemistry,	8		2
Chemistry, Toxicology,	8I		1
Chemistry, Organic,	32		2
Physics,	1, 6, & 10	5	5
Zoölogy, Invertebrate,	1	2	
Zoölogy, Vertebrate,	2	2	
Invertebrate Zoölogy,	2		3
Comp. Anatomy,	5		3
Botany,	1	3	1
Psychology,	1	2	
Neurology,	3		2
		—	—
		20	19

SECOND YEAR.

<i>Subject.</i>	<i>Course No.</i>	<i>1st Term Hours.</i>	<i>2d Term Hours.</i>
Anatomy,	1	13	
Physiological Chemistry	40	2	
Physiological Chemistry,	4I	3	
Histology,	1		8
Physiology, Recitations,	2		3
Physiology, Lectures,	1		3
Physiology, Laboratory,	5		3
El. Social Economics,	4I	2	2
		—	—
		20	19

CORNELL UNIVERSITY MEDICAL COLLEGE.

THIRD YEAR.

<i>Subject.</i>	<i>Course No.</i>	<i>1st Term Hours.</i>	<i>2d Term Hours.</i>
Anatomy,	2	9	
Anatomy,	4	1	
Pathology,	40	3	
Nervous System,	8	2	1
Physiology, Recitations,	4		2
Anatomy,	3		2
Bacteriology,	43		6
Materia Medica,	1		2
Medicine,	1		2
Surgery,	1		4
Obstetrics,	1		2
Advanced Work,		4	
		19	21

Upon completing the above work the student will take the regular third and fourth year's work in New York City. Those students who for any reason wish to modify the work of the first year should consult the Secretary of the Medical College.

REQUIREMENTS FOR ADMISSION.

(For details in regard to entrance see pages 22-28.) No student is admitted except at the beginning of the college year in September.

For admission to the FIVE YEAR MEDICAL COURSE and to the COLLEGE OF ARTS AND SCIENCES the following subjects are required:

English, History, Plane Geometry, Elementary Algebra, and any *one* of the *three* following groups, A, B, or C:

(A) Latin Grammar, Cæsar, Latin Composition, Cicero, Virgil, Greek Grammar, Xenophon, Greek Composition, and Homer.

(B) Latin Grammar, Cæsar, Latin Composition, Cicero, Virgil, and *either* Advanced French, Advanced German, or Advanced Spanish.

(C) Advanced French, Advanced German, Solid Geometry, Advanced Algebra, and Plane and Spherical Trigonometry.

One of the following entrance subjects, Physics, Chemistry, Geology, Botany, or Zoölogy, may be offered in place of advanced Mathematics.

CORNELL UNIVERSITY MEDICAL COLLEGE.

The Medical Faculty recommend that the students enter in Group C in preference to A or B.

For further information concerning entrance requirements, Regents' credentials, or school certificates, apply to David F. Hoy, Registrar, Cornell University, Ithaca, N. Y.

Students entering the five-year medical course and students in the College of Arts and Sciences should consult the Secretary of the Medical College in regard to their Medical Students' Certificate.

RESIDENCE AND REGISTRATION.

The college year is nine months long, extending from the last of September till about the middle of June, and is divided into two nearly equal terms. (For exact dates, see calendar on page 97.)

Residence in Ithaca is required of all students. For leave of absence during the session, application should be made to the Secretary.

At the beginning of the term (September 24-25, 1907, and February 1, 1908) students must register with the University Registrar, Room 9A, Morrill Hall. After registration with the University Registrar, they must register with the Secretary of the Medical College, in Stimson Hall.

SCHOLARSHIPS. (See page 35.)

EXAMINATIONS.

Students are advanced in course from one year to the next upon passing examinations upon the work of that year. As in the Academic Department, the work of each year is considered final of itself. There is no unnecessary repetition of subjects taught from year to year. According to the usage of the other departments, the University student found to be markedly deficient will be dropped from the college.

ADVANCEMENT FROM SECOND TO THIRD YEAR.

Upon the completion of the two years in Ithaca, the student must obtain from the Faculty a statement of all the work which he has done;

and accompanying this statement must be a recommendation that he be allowed to register in the New York division. As a student is not advanced from one year to another in the New York division until all the work of the year is completed, a student from Ithaca cannot enter the third-year class in New York until the entire schedule of the first two years has been successfully completed. For removing any conditions, examinations are held at the beginning of the fall term, both in Ithaca and in New York City. The student is at liberty to take these examinations in Ithaca or in New York City. The examination on a subject in either place is final for that year. That is, the student will not be permitted to try an examination on a subject in Ithaca, and take advantage of the later date for the examination in New York to have a second examination on the same subject in the same autumn.

If a student is deficient in two or more subjects there is no objection to his taking the examination in one or more subjects in Ithaca, and the remaining ones in New York, the same autumn.

MEDICAL SOCIETY.

The Cornell Medical Society is a student organization. At the meetings, papers prepared by the members are read, followed by general discussion. The aim is to give mutual aid in gaining general and special medical knowledge, facility in conducting the exercises of the meetings, and in presenting papers and discussions in a clear and forcible manner before an audience.

CHARGES FOR INSTRUCTION.

FIRST YEAR.

Matriculation	\$5
Tuition	\$150
Laboratory Fees and Deposit	\$56

SECOND YEAR.

Tuition	\$150
Laboratory Fees and Deposit	\$49

BOARD AND ROOMS.

The cost of living in Ithaca, including board, room, fuel, and lights, varies from \$4 to \$10 per week. By the formation of clubs, students are sometimes able to reduce their expenses to \$3.50 per week for room and board, and occasionally to even less than that amount.

The cost for board, rent of furnished room, fuel and lights, in Sage College and Sage College Cottage, which are exclusively for women, varies from \$5 to \$6.50 a week. A student occupying alone one of the best rooms pays \$6.50 a week. If two occupy such a room together, the price is \$5.75. Those occupying less desirable rooms, with two in a room, pay \$5 a week each. Both buildings are warmed by steam, lighted by electricity, and, in most cases, the sleeping apartment is separated from the study.

Letters of inquiry in regard to board and rooms at the Sage College and the Cottage should be addressed to Mr. G. F. Foote, Business Manager of Sage College, Ithaca, N. Y.

MATRICULANTS IN NEW YORK CITY.

Almgren, Ebba Elizabeth.....	Stockholm, Sweden.
Anderson, Victor William.....	New York City.
Arnold, Edward August.....	New York City.
Arnold, Harrison Brummell.....	New York City.
Baker, Augustus Lynn Landon.....	Ledgewood, N. J.
Baker, James Elmer.....	Brooklyn, N. Y.
Baldwin, Francis William.....	New York City.
Barash, David Harry.....	New York City.
Barkhorn, Henry Charles.....	Newark, N. J.
Beder, Morris.....	New York City.
Beebe, Silas Palmer, B.S., Ph.D.....	Flushing, L. I.
Bell, Albert Mortimer.....	Glen Head, N. Y.
Berger, Edward.....	New York City.
Biram, James Harrington, B.S.....	Provincetown, Mass.
Birdsall, Winslow.....	Croton Lake, N. Y.
Bishop, Ernest Simons, B.A.....	Providence, R. I.
Block, Alexander.....	New York City.
Blum, Samuel George.....	Brooklyn, N. Y.
Boehme, Gustav Frederick, B.S.....	New York City.
Bower, Jacob.....	New York City.
Bradley, John Ruskin.....	King Ferry, N. Y.
Breglia, John Eugene.....	New York City.
Breitman, Charles.....	Brooklyn, N. Y.
Brendler, Charles.....	New York City.
Brown, Harold William.....	Jersey City, N. J.
Bryant, Frank Alva Mitchell.....	New York City.
Caplan, Isidor.....	Brooklyn, N. Y.
Chapman, Louis Ballantine.....	Hartford, Conn.
Chappel, Halbert William, A.B., L.L.B., A.M.....	New York City.
Clurman, Morris J., A.B.....	New York City.
Coffin, Ernest Linwood.....	Ashland, Me.
Cohen, Harry.....	New York City.

Cohen, Henry Julius.....	New York City.
Cohn, Mark.....	New York City.
Contessa, Lawrence.....	New York City.
Cooley, James Allen.....	Canandaigua, N. Y.
Cosgrove, Samuel Allison.....	Jersey City, N. J.
Crawford, Mary Merritt, A.B.....	Nyack, N. Y.
Crudden, Matthew James.....	New York City.
Curley, William Henry.....	Pittsfield, Mass.
Davidson, Benjamin.....	Brooklyn, N. Y.
Davis, Charles Roy, A.B.....	Pine Bluff, Ark.
de la Motte, James Francis.....	New York City.
Denton, William.....	Port Jervis, N. Y.
DeWolf, Harold.....	Bristol, N. Y.
Donahue, William James Aloysius, A.B.....	Newark, N. J.
Donovan, James Clement.....	Goshen, N. Y.
Doolittle, Glen J.....	Wolcott, N. Y.
DuBois, Leo Charles.....	Newburgh, N. Y.
DuBois, Phebe Lott.....	Holmdel, N. J.
Duke, Louis.....	Brooklyn, N. Y.
Eckel, Edward Jacob.....	Syracuse, N. Y.
Eggleston, Cary.....	New York City.
Ehrlich, Simon David.....	New York City.
Eichel, Henry.....	New York City.
Engel, Joseph.....	Newport, R. I.
Epstein, Jacob Julius, Ph.G.....	New York City.
Ernst, Peter H., M.D.....	New York City.
Failing, Brayton Earl.....	Sherburn, N. Y.
Fanoni, Antonio, M.D.....	New York City.
Farkas, Morris.....	New York City.
Farnell, Frederic James.....	Providence, R. I.
Feldstein, Bernard.....	New York City.
Flagg, Paluel Joseph.....	Yonkers, N. Y.
Fowler, Royale Hamilton.....	Brooklyn, N. Y.
Frank, Louis James.....	Brooklyn, N. Y.
Frank, Morris.....	Elizabeth, N. J.
Gaby, Robert Edward, A.B.....	Toronto, Canada.
Gaffney, Raymond James.....	New York City.
Gelser, George Merrill, A.B.....	Ebenezer, N. Y.
Gillespie, George Maitland.....	Stamford, N. Y.

Gillette, Arthur Taylor.....	Cuba, N. Y.
Ginsburg, Benjamin.....	New York City.
Godfrey, William Truitt.....	New York City.
Goldberg, Isaac.....	New York City.
Goldberger, Louis.....	New York City.
Goldstein, William.....	Brooklyn, N. Y.
Gootenberg, David.....	New York City.
Gottlieb, Harry.....	New York City.
Gould, Lewis Arthur.....	Interlaken, N. Y.
Graves, Gaylord Willis, A.B.....	Ithaca, N. Y.
Graves, Marion Lee, M.D.....	Galveston, Texas.
Grimley, John Goodwin Joseph.....	New York City.
Grossman, Jacob.....	New York City.
Hamblet, Mary Lucia, A.B.....	Salem, Mass.
Harnden, Frank.....	Brooklyn, N. Y.
Harris, Leon.....	Brooklyn, N. Y.
Hartigan, William Edward.....	Norwich, N. Y.
Hascall, Theodore Conrad, Ph.B.....	New York City.
Hatfield, Hazel May, A.B.....	Newark, N. J.
Hess, Walter.....	New York City.
Himmelstein, Urius.....	New York City.
Hirschfield, David Bernhard.....	New York City.
Hoag, Arthur Edmund.....	Millerton, N. Y.
Hoenig, Edward.....	New York City.
Hofmann, John William.....	New York City.
Hoffman, Florentine Milton.....	New Brunswick, N. J.
Hoffmann, Richard.....	New York City.
Horwitt, Solomon.....	New York City.
Hydrofsky, Charles Israel.....	Brooklyn, N. Y.
Itskovitz, John Henry.....	New York City.
Jablons, Benjamin.....	New York City.
Jacobowitz, Adolph.....	New York City.
Jacobs, Frederick Henry, Jr.....	Woodhaven, L. I.
Johnson, Edith Eugenie.....	Dakota, Neb.
Joshi, Lemuel Lucas, B.Sc.....	Bombay, India.
June, Charles Darius.....	Jersey City, N. J.
Joseph, David.....	New York City.
Kahn, Max.....	New York City.
Kahn, Morris Hirsch.....	New York City.

Kanouse, George Edward.....	Hackettstown, N. J.
Keet, Ernest Ellsworth.....	Saranac Lake, N. Y.
Kellie, Kenneth Harrison Allon, M.A., M.B.....	London, England.
Keil, Frank Conrad.....	New York City.
Kemp, Maurice.....	Catasauqua, Pa.
Kenney, John Stanley.....	Newark, N. J.
Kipp, Ralph.....	Lexington, N. Y.
Kohn, Louis.....	Plymouth, Pa.
Korowitz, Louis.....	New York City.
Krellenstein, Irving Bernard.....	New York City.
Kresky, Henry.....	Brooklyn, N. Y.
Kretz, Clarence Edgar.....	New York City.
Krugler, Wallace.....	Jersey City, N. J.
Laird, Ida Marie, A.B.....	Auburn, N. Y.
Lampert, Milton Albert.....	Brooklyn, N. Y.
Landesman, Harry.....	New York City.
Langrock, Edwin George.....	New York City.
Larkin, John Francis.....	Kingston, N. Y.
Laurie, Thomas Forest.....	Auburn, N. Y.
Lehman, Max.....	Brooklyn, N. Y.
Levy, Saul.....	New York City.
Liebling, Philip.....	New York City.
Lichtenstein, Perry Maurice.....	New York City.
Liefeld, Walter Link.....	Brooklyn, N. Y.
Lindenbaum, Moses Harold.....	New York City.
Linder, Samuel.....	Brooklyn, N. Y.
Lipshitz, Mark.....	New York City.
Longbothum, George Thornton.....	Fort Salonga, N. Y.
Lowthian, Walter Edward.....	New York City.
Lozynski, Walter William.....	L. I. City, N. Y.
Luke, Harry Cliff, Ph.G.....	Salamanca, N. Y.
Luftig, Jacob.....	New York City.
Lutz, Charles, Jr., Ph.G.....	New York City.
Lynch, George Michael.....	Andover, N. Y.
McCombs, Carl Esselstyne, A.B.....	Frankfort, N. Y.
McEveety, Charles.....	New York City.
McGrath, John Francis.....	Holyoke, Mass.
McKay, Florence Lucinda, A.B.....	Ithaca, N. Y.
McNeill, Walter Harold, Jr.....	Mt. Vernon, N. Y.

CORNELL UNIVERSITY MEDICAL COLLEGE.

MacRae, Thomas.....	New York City.
McSweeney, Jerome Augustine.....	New York City.
Mann, Charles Maitland, A.B.....	New York City.
Mansfield, Edward Raymond, B.S.....	Orono, Me.
Manulkin, George.....	Brooklyn, N. Y.
Marriott, Williams McKim, B.S.....	New York City.
Marsh, Edward Harvey.....	Brooklyn, N. Y.
Marschark, Max.....	New York City.
Martin, Arthur Chalmers.....	Rockville Center, N. Y.
Mendalis, Morris.....	Brooklyn, N. Y.
Meyer, Henry Edward Berthold.....	Brooklyn, N. Y.
Mitchell, James Reid, Jr., A.B.....	New York City.
Moench, Gerhard Ludwig.....	New York City.
Moorman, Silas Mercer, A.B.....	Georgetown, Ky.
Mosher, George.....	New York City.
Murray, Morrison Foster.....	Brooklyn, N. Y.
Nadoolman, Max.....	New York City.
Neustadt, Benjamin.....	New York City.
Newman, Abraham Jacob.....	Tarrytown, N. Y.
Newman, Leander Allison.....	Penn Yan, N. Y.
O'Brien, Paul.....	Pittsburg, Pa.
Olitsky, Peter Kosciusko.....	New York City.
O'Neill, Charles Leo, A.B.....	Newark, N. J.
Orth, Rudolph Daniel.....	Blauvelt, N. Y.
Pabst, Charles Frederick.....	New York City.
Palmer, George Hollis.....	Brooklyn, N. Y.
Parker, Esther Emily, A.B.....	Poughkeepsie, N. Y.
Patterson, William Maxwell.....	New York City.
Pease, George Norman, A.B.....	Portland, Ore.
Pierson, Farrand Baker, A.B.....	Brooklyn, N. Y.
Polon, Albert.....	New York City.
Pomerance, Solomon.....	Brooklyn, N. Y.
Pooley, Thomas Rickett, Jr.....	New York City.
Prince, Howard Love.....	Byron Center, N. Y.
Pulver, Grace Coe, M.D.....	Torrington, Conn.
Rabinowitz, Harold Max.....	Brooklyn, N. Y.
Rabinowitz, Meyer Alfred.....	Brooklyn, N. Y.
Rappaport, Barneth.....	Brooklyn, N. Y.
Read, Clarence Arthur.....	Pittsfield, Mass.

CORNELL UNIVERSITY MEDICAL COLLEGE.

Redding, Charles Joseph Vincent.....	Owego, N. Y.
Reed, Lucy Carleton, A.B.....	Southbridge, Mass.
Reid, Eva Charlotte.....	Katonah, N. Y.
Reid, John Joseph, Jr.....	New York City.
Reilly, Daniel Robert.....	Cortland, N. Y.
Reissman, Isidor Irving.....	New York City.
Robinson, Daisy Michaud Orleman, M.S., M.D.....	New York City.
Roberto, Romeo.....	New York City.
Rockman, Jacob.....	Brooklyn, N. Y.
Rohn, John Philip, Jr.....	Newark, N. J.
Ronsheim, Joshua.....	Brooklyn, N. Y.
Rubin, Louis.....	Paterson, N. J.
Rubinowitz, Alexander Hyman.....	Brooklyn, N. Y.
Rulison, Elbert Theodore, Jr., B.S.....	Schenectady, N. Y.
Rueck, Gustav Adolph.....	South Byron, N. Y.
St. Lawrence, William Patrick.....	Paterson, N. J.
Sachs, Jacob.....	Brooklyn, N. Y.
Santee, Harold E., A.B.....	Hornellsville, N. Y.
Schlegman, Saul.....	New York City.
Schorr, Herman Emanuel.....	New York City.
Schultz, Max.....	New York City.
Schulz, Julius George, A.B.....	Mt. Vernon, N. Y.
Schwartz, Benjamin.....	New York City.
Schwartz, Jesse David, B.S.....	Staten Island, N. Y.
Schwartz, Leo Samson, Ph.G.....	New York City.
Schwallie, Albert Eugene, Ph.G.....	Brooklyn, N. Y.
Seaman, Benjamin White.....	Rockville Center, N. Y.
Seibert, Otto John.....	Newark, N. J.
Sellaro, Vincenzo, M.D.....	New York City.
Senigaglia, Giacomo Abraham.....	Nyack, N. Y.
Seybolt, Robert Francis.....	New Brighton, S. I.
Shapero, Isador.....	New York City.
Sheldon, William Hills.....	Auburn, N. Y.
Sherrerd, William Russell.....	Whitefield, N. H.
Sill, William Miller.....	Jamestown, N. Y.
Silverman, Samuel.....	Brooklyn, N. Y.
Skilton, Avery Wadsworth.....	Rockville Center, N. Y.
Slutsky, Nathan Israel.....	Brooklyn, N. Y.
Smith Esmond Bathgate.....	Brooklyn, N. Y.

Smith, Malcolm Kinmonth.....	Morristown, N. J.
Solomon, Meyer.....	New York City.
Sonnenberg, Jerome.....	New York City.
Spaulding, Harry Vanness.....	New York City.
Squire, Frederick Duane.....	Stony Brook, N. Y.
Stancell, William Wiley, M.D.....	Margaretville, N. C.
Stark, Jesse B.....	Brooklyn, N. Y.
Steibel, Louis Robert.....	New York City.
Steinbugler, William Francis.....	New York City.
Stilson, George Doremus.....	Buffalo, N. Y.
Straub, Herbert.....	Long Island City, N. Y.
Sutton, Frederick A.....	Hackettstown, N. J.
Streen, Morris.....	Newark, N. J.
Sutton, Leslie Allen, M.D.....	Brewster, N. Y.
Thomas, Belle.....	New York City.
Thro, William Crooks, B.S.A., A.M.....	Ithaca, N. Y.
Tierney, John Dennis.....	New York City.
Tomkins, William.....	Brooklyn, N. Y.
Tran, Irving.....	New York City.
Unger, Max.....	New York City.
Veith, George John.....	Paterson, N. J.
Wager, Max Louis.....	New York City.
Waldie, Thomas Edward.....	Brooklyn, N. Y.
Walker, William Joseph, A.B.....	New York City.
Walsh, Thomas J., M.D.....	Buffalo, N. Y.
Walzer, Abraham.....	Brooklyn, N. Y.
Ware, John Sayers.....	Stapleton, N. Y.
Weber, Salo, A.B.....	New York City.
Webster, Blakeley Royce.....	Middletown, N. Y.
Weiss, Samuel.....	New York City.
Weinstein, Henry.....	New York City.
Welch, Stewart Henry, A.B.....	Uniontown, Ala.
Wellbery, Edward Montgomery.....	Buffalo, N. Y.
Welles, Edward Murray, Jr., A.B.....	Addison, N. Y.
Wheeler, George Whiting.....	Buffalo, N. Y.
White, Robert Joseph.....	Lockport, N. Y.
Wilson, David, A.B.....	Amsterdam, N. Y.
Williams, Rodman Ralph.....	Fredonia, N. Y.
Wiederschall, Sidney.....	New York City.

CORNELL UNIVERSITY MEDICAL COLLEGE.

Wing, Lucius Arthur, B.Sc.....	Columbus, Ohio.
Wolff, Solon Charles.....	New York City.
Wolf, Charles.....	New York City.
Woolsey, Chester Howard, B.S., M.D.....	San Francisco, Cal.
Workman, Isaac.....	New York City.
Wynkoop, Roy Baldwin.....	Chemung, N. Y.
Yum, William.....	New York City.
Zehnder, Anthony Charles.....	Newark, N. J.
Zingher, Abraham.....	New York City.
Zuckerman, Jerome.....	New York City.
Zuckerman, Samuel.....	New York City.

MATRICULANTS AT ITHACA.

Agan, William Byron.....	Troy, N. Y.
Allaben, Charles Moore.....	Margaretville, N. Y.
Andrews, Benjamin Clark.....	South Kortright, N. Y.
Axtell, Clayton Morgan.....	Deposit, N. Y.
Baker, Davis.....	North Granville, N. J.
Baker, Valentine Collamer.....	Ballston Spa, N. Y.
Ballou, Edward J.....	Gardenville, N. Y.
Barnes, Harold Fairchild.....	New York City.
Bates, Ella Louise.....	Los Angeles, Cal.
Betts, Benjamin Harrison.....	Tonawanda, N. Y.
Blostein, Fred.....	Elmira, N. Y.
Brundage, Walter Hammond.....	Pleasantville Sta., N. Y.
Bruyn, Elizabeth Armitage.....	Brooklyn, N. Y.
Carmer, John Chester.....	Lyons, N. Y.
Coulson, Robert Earl.....	Buffalo, N. Y.
Cunningham, Edward.....	Lyon Falls, N. Y.
Dean, Elvira Dudley.....	Ithaca, N. Y.
Dempsey, George Roger.....	Millerton, N. Y.
Denniston, Frank.....	New York City.
Donoghue, James K.....	Rochester, N. Y.
Dowdle, Edward.....	Oswego, N. Y.
Durand, Albert Cyrus.....	Ithaca, N. Y.
Forrest, Gertrude Edith.....	Madison, N. J.
Gewertz, Maurice.....	Brooklyn, N. Y.
Gibson, Edwin Fred.....	Norwich, N. Y.
Gleason, James Patrick.....	Lyons, N. Y.
Graham, John Cooper.....	Brookton, N. Y.
Greene, Albert Dygert.....	Fort Plain, N. Y.
Hall, Harold Louis.....	Saratoga Springs, N. Y.
Hart, James Finlay.....	New York City.
Hobbs, Frederick Dudley.....	Roselle Park, N. J.
Holton, Walter B.....	Montclair, N. J.

CORNELL UNIVERSITY MEDICAL COLLEGE.

Horn, Stanley Granger.....	Brooklyn, N. Y.
Howell, William Leonard.....	Leroy, N. Y.
Hutchinson, Alice.....	Sewaren, N. Y.
Kelley, John Francis.....	Scranton, Pa.
Lance, Ruth Mitchell.....	Kingston, Pa.
Landes, Pauline Newell.....	Curityba, Parawa, Brazil.
Lattin, Burton.....	Walden, N. Y.
Loeber, Maud.....	New Orleans, La.
Lounsberry, Lee Tucker.....	Lounsberry, N. Y.
Lundell, Nils Oscar.....	Poughkeepsie, N. Y.
Mackey, Clarence Herbert.....	Lancaster, N. Y.
McCormick, Francis Joseph.....	Ithaca, N. Y.
McNamara, Mabel Anne.....	Binghamton, N. Y.
Neal, Josephine Bicknell.....	Lewiston, Maine.
Patrick, Clarence J.....	Malone, N. Y.
Pawling, Jesse Randolph.....	Watertown, N. Y.
Place, Benoni Austin.....	Qualey, Ohio.
Potts, Henry Wilson.....	Troy, N. Y.
Pulsifer, Nathan.....	Auburn, Maine.
Reynolds, Earl Carlton.....	Ballston Spa, N. Y.
Richens, Lulie Belle.....	Auburn, N. Y.
Robertson, Ransom Smith.....	Ashville, N. Y.
Scudder, Charles Fleet.....	Northport, L. I.
Shookhoff, Charles.....	Brooklyn, N. Y.
Smith, Sidney Daniel.....	Rodman, N. Y.
Swezey, Sarah Ellis.....	Jamaica, N. Y.
VanKleeck, Louis Ashley.....	Ithaca, N. Y.
VanMarter, James Howard.....	Newfield, N. Y.
Vavasour, James Francis.....	Dalton, Mass.
Waldvogel, Herbert Jones.....	Little Falls, N. Y.
Whitehead, Frank Edward.....	Morristown, N. J.
Wearne, Raymond.....	Binghamton, N. Y.
Willard, Luvia Margaret.....	East Angus, Quebec, Can.

HOSPITAL APPOINTMENTS.

CLASS OF 1906.

Presbyterian Hospital.

Frank Perry Goodwin.

New York Hospital.

Arthur Harold Martin, A.B.

N. Y. Post-Graduate Hospital.

Archibald Eastwood Chace, A.B.

Fordham Hospital.

Louis Joseph Placek.

Lincoln Hospital.

Frank Kaufhold.

Harlem Hospital.

Leo Francis Schiff.

Brooklyn German Hospital.

August George Horstman,

Jacob Kissel.

Brooklyn City Hospital.

Thomas Grant Tousey.

Brooklyn E. D. Hospital.

Samuel Tietze.

Kings County Hospital.

Francis Joseph Cahill, A.B.

St. Catherine's Hospital.

William Henry Specht.

St. Mary's Hospital, Jamaica, N. Y.

John Alphonsus McNevins,

Harry Newport Golding.

Rochester City Hospital.

Floyd Stone Winslow.

Miami Valley Hospital, Dayton, Ohio.

Edward Bond Markey.

Robert Packer Hospital, Sayre, Pa.

Charles George Koehler, Jr., A.B.

Bellevue Hospital.

(Second Division.)

Edgar Gordon Cuddeback, A.B.,

Clarence Paul Oberndorf, A.B.,

Walter Austin McLaren,

Milton John Johnson,

James Erwin Reed, Jr.,

Thomas Joseph Kearns, B.A.

German Hospital.

Abraham Leon Garbat.

CORNELL UNIVERSITY MEDICAL COLLEGE.

J. Hood Wright.

Leo Halpin.

*Methodist Episcopal Hospital,
Brooklyn, N. Y.*

Frank Howard Richardson, A.B.

Mount Sinai Hospital.

Abraham Sophian,
Bernard Eliasberg,
Michael Halpern Barsky,
William Lintz.

St. Vincent's Hospital.

Ralph Robinson.

Lebanon Hospital.

Hyman Leon Ratnoff.

Sydenham Hospital.

William Isidore Wallach,
Henry Aronson.

Springfield City Hospital.

Henry Hopson Wilcox.

*St. Mary's Hospital, Rochester,
N. Y.*

Adelbert J. Price.

*St. Michael's Hospital, Newark,
N. J.*

Warren George Smith.

Watertown City Hospital.

Nina A. Dennis, A.B.

COLLEGE BUILDING.

The Medical School and a Dispensary, each with a main entrance on First Avenue, are arranged as follows:

The basement is commodious, well lighted, and ventilated, and contains the engines, boilers, dynamos and ventilating machinery; the refrigerating and cold-storage plant, with the injecting and freezing rooms; a large room with lockers, and another for bicycles. Store-rooms, including one for drugs; four rooms, including a small theatre and a workshop, for orthopædic surgery; toilet rooms and lavatories, and several rooms for the janitor of the building, are also found here. On the basement level, but outside of the building, is a large incinerating furnace for consuming all the refuse from the College.

The principal entrances to the building are on the *First Floor*. They open from First Avenue into vestibules, one leading to the main hall of the school, the other to the general waiting room of the dispensary, between which the large amphitheatre is situated.

The rooms of the Children's Department, which include an isolating room and a small theatre, are placed between the entrances, while around the waiting room of the dispensary are located the office for distributing patients, the pharmacy rooms for the departments of surgery and medicine, waiting and dressing rooms, lavatories, and rooms for the Roentgen-ray and sterilizing apparatus.

Grouped around the main hall of the school on this floor are the council and faculty room, the office of the Dean, the secretary, and the clerk, reading and recitation rooms.

Upon the *Second Floor*, the same general arrangement prevails. On the side of the dispensary there is a large waiting room, surrounded by rooms assigned respectively to the departments of genito-urinary diseases, diseases of the nervous system, of the skin, and of the ear, while covering the space at the middle front of the building are the rooms belonging to the departments of the eye and the throat, with a series of twenty dark stalls for the simultaneous examination of as many patients by as many students. Small waiting and dressing rooms

and lavatories for the convenience of the patients are also found on this floor. The upper part of the large amphitheatre, extending from the floor below, occupies the centre of the rear half of this floor. The remainder of the floor is given up to the school. Here is found a hall, around which are grouped recitation rooms and laboratories for clinical pathology. These laboratories have convenient access from the dispensary, permitting ready coöperation in the work carried on there.

The *Third Floor* of the building is given up to teaching space, excepting an area upon the "dispensary side" of the building, which is assigned to the departments of gynecology and obstetrics. This comprises a small theatre, examining, waiting, dressing, and toilet rooms, manikin, and two recitation rooms. The remainder of this floor is occupied by two amphitheatres (each having a seating capacity of about 175 students); one for anatomy, physiology, and pathology, the other for chemistry; attached to each are preparation and research rooms. The chemical laboratories also occupy this floor, including the main laboratory, the laboratory for physiological chemistry, rooms for apparatus, etc., and a library of chemistry.

There is the usual hall and corridor space with toilet rooms and lavatories.

The *Fourth Floor* is occupied by the upper part of the two amphitheatres which project from the floor below. The department of pathology and bacteriology occupies the remainder of this floor. Ample facilities are provided, not only for the class work and demonstrations, but for special and advanced courses and investigations. A library of pathology and bacteriology is situated here.

The *Fifth Floor* is devoted to the department of practical anatomy. The main dissecting room occupies a space of 160 by 55 feet; there is also a large room, 40 by 50 feet, which is set apart for advanced undergraduates and post-graduates. These rooms can be cooled by the refrigerating plant in such a manner as to permit the pursuit of practical anatomy with as much comfort in summer as in winter.

This floor presents such facilities as lockers for 300 students, a small demonstration theatre with prosecting and cold-storage room attached, private dissecting rooms, a bone room, a library, a reading and study room, and a commodious room for instruction in operative surgery.

The department of photography, the animal house, and a room for the preparation of bones are placed in a half-story at the top and rear of the building.

There are two main staircases, one for each department of the building, passenger elevators, and a freight lift.

The building itself is fireproof throughout, being constructed of steel, stone, brick, marble, and tile. The glazed brick and glazed tile walls, tile floors, and enamel painted cast-iron trim to the doors and interior of the windows insure cleanliness. Special attention has also been paid to the problems of refrigeration, lighting, heating, and ventilation, so that every part of the structure can be easily kept at all times in an agreeable and sanitary condition.

In conjunction with this building the Loomis Laboratory will be employed in the manner already set forth.

CORNELL MEDICAL ALUMNI SOCIETY.

AIMS.

"ARTICLE II. The aims of this Society shall be as follows:—(1) To further the interests of the Medical College and the interests of the University at large. (2) To further the interests, educational, professional and social, of the graduates of the Medical College. (3) To promote good fellowship among the graduates, and between the graduates and undergraduates of the Medical College."

MEMBERSHIP.

"ARTICLE III., Section 1. All graduates of the Cornell University Medical College shall be considered members of this Society upon the payment of one dollar."

"ARTICLE III., Section 2. There shall be an annual fee of one dollar, to be paid on or before the date of the annual business meeting."

OFFICERS.

"ARTICLE IV., Section 1. The officers of this Society shall consist of a President, Vice-President, Secretary, and Treasurer. They shall be residents of New York City or vicinity during their term of office."

"Section 2. The term of office shall be one year."

COMMITTEES.

"ARTICLE V., Sections 1 and 3. The officers of this Society, and six additional members elected at the annual meeting, shall constitute the Executive Committee. This Committee shall receive reports from all

other Committees, and shall initiate and supervise plans for fulfilling the purposes of this Society. The President shall act as chairman *ex-officio*."

MEETINGS.

"ARTICLE VI., Section 1. There shall be an annual meeting for the election of officers and the transaction of other business, to be held at the College Building during December, the date to be appointed by the Executive Committee."

"Section 2. There shall be at least one social meeting a year, held during the fall term, to which the Faculty, graduates and undergraduates may be invited."

Address all communications to the
SECRETARY OF ALUMNI SOCIETY,
Cornell University Medical College,
First Ave. and 28th St.

CORNELL UNIVERSITY

COMPRISES THE FOLLOWING DEPARTMENTS:

- The GRADUATE DEPARTMENT (Degrees A. M., Ph. D., etc.)
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- The COLLEGE OF CIVIL ENGINEERING (Degree C. E.)
- The SIBLEY COLLEGE OF MECHANICAL ENGINEERING AND MECHANIC ARTS (Degree M. E.)

For copies of the University Register and for additional information, apply to

REGISTRAR, CORNELL UNIVERSITY,

Ithaca, N. Y.

* The full four-year course of the CORNELL UNIVERSITY MEDICAL COLLEGE is given in the City of New York; the work of the first and second years is also given at Ithaca, where it may be taken by men students and where it must be taken by women students. Both men and women students take the last two years of the course in New York City. Special announcements of the Medical College and information of every kind regarding it will be furnished on application to

SECRETARY, Cornell University Medical College,
First Avenue and 28th Street, New York City.

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CORNELL UNIVERSITY
MEDICAL COLLEGE

ANNOUNCEMENT
1908-1909

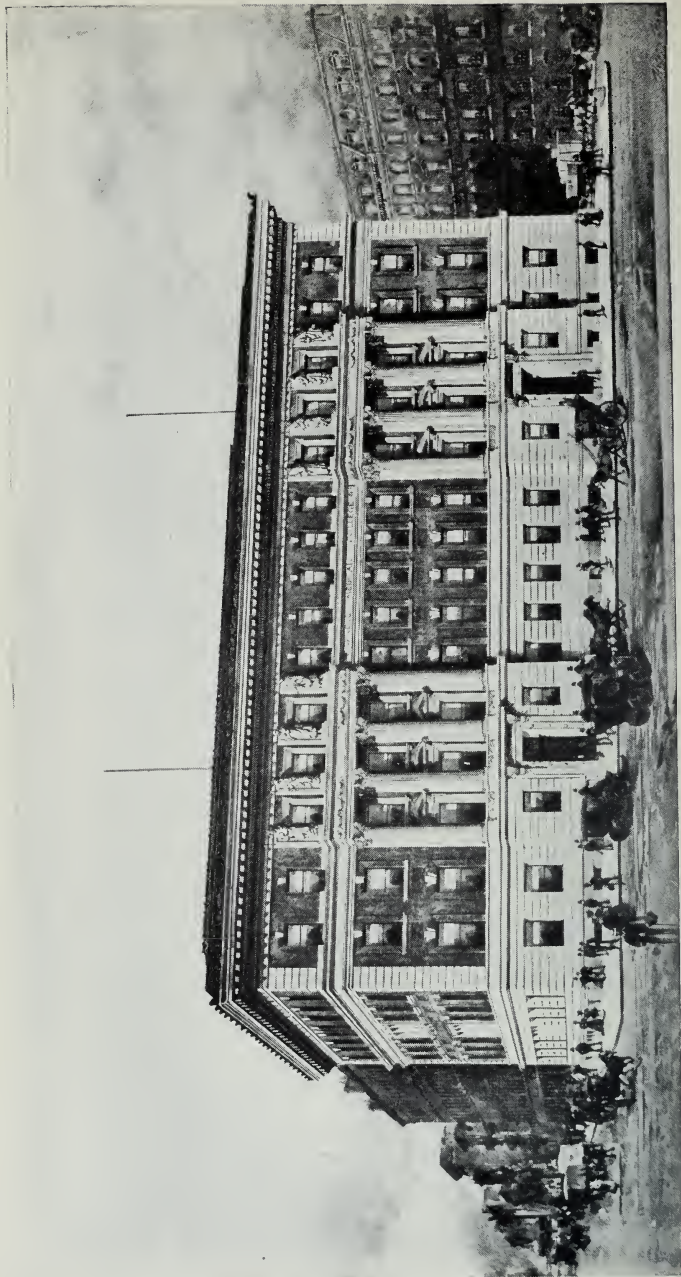


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CORNELL UNIVERSITY MEDICAL COLLEGE

CORNELL UNIVERSITY MEDICAL COLLEGE

ANNOUNCEMENT 1908-1909

NEW YORK CITY

PUBLISHED BY THE UNIVERSITY

P. S. W.

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CALENDAR.

1908.

- Sept. 21, Monday—Examinations begin for admission to the first year of all departments of the University.
- Sept. 28, Monday—Examinations begin for conditioned students and for those applying for advanced standing in the medical department.
- Sept. 30, Wednesday—College opens.
- Nov. 3, Tuesday—Election day. Legal holiday.
- Nov. 26, Thursday—Thanksgiving recess begins.
- Nov. 30, Monday, 9 A.M.—Thanksgiving recess ends.
- Dec. 23, Wednesday—Christmas recess begins.

1909.

- Jan. 4, Monday, 9 A.M.—Christmas recess ends.
- Jan. 4, Monday }
- Jan. 5, Tuesday } Mid-winter Examinations.
- Feb. 22, Monday—Legal holiday.
- April 9, Friday—Easter recess begins.
- April 12, Monday, 9 A.M.—Easter recess ends.
- May 10, Monday—Examinations begin.
- June 9, Wednesday—Commencement.

All students must be registered at the secretary's office at the opening of the session. No student will be admitted after October 7th without special permission of the faculty. Immediately after registration the fees must be paid at the treasurer's office.

Men may take the first two years in either New York or Ithaca. Women must take the first two years at Ithaca. All students take the last two years in New York.

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*Term of office (5 years) expires in 1909, the next group of six in 1910, etc., etc.,
 (1) B., elected by Board. (2) A., elected by Alumni. (3) G., elected by the New
 York State Grange for 1907-1908.

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MEDICAL COLLEGE COUNCIL.

At the foundation of the Medical College the following resolution establishing a Medical College Council and determining its functions was adopted by the Board of Trustees of Cornell University:

Resolved, That for the purpose of making recommendations to the Board of Trustees or the Executive Committee in relation to the business management of the Medical College there be established, and there is hereby established, a Medical College Council which shall consist of seven members, to wit: the President of the University (who shall be *ex-officio* chairman), the Director of the Medical College, and three trustees to be elected by the Board of Trustees or the Executive Committee who shall be appointed, one for one year, one for two years, and one for three years, and their successors be appointed for three years, and two members of the Faculty, to be elected by the Faculty, who shall be appointed, one for one year, and one for two years, and their successors to be appointed for two years, and that all appointments to fill vacancies be made for unexpired terms.

The Council at present consists of the following members:

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Instructor in Physical Diagnosis.

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CHARLES R. STOCKARD, Ph.D.,

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WILLIAM F. STONE, Ph.B., M.D.,

Instructor in and Demonstrator of Anatom

EWING TAYLOR, M.D.,

Instructor in Histology.

BENJAMIN T. TILTON, A.B., M.D.,

Instructor in Surgery.

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MORTIMER WARREN, M.D.,

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CHARLES E. S. WEBSTER, JR., M.D.,

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RICHARD WEIL, M.D.,

Assistant in Experimental Pathology.

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Assistant in Physiology.

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Assistant in Physiology.

CLINICAL INSTRUCTORS.

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Chief of Staff.

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WILLIAM ARMSTRONG, M.D.,

LEONARD G. WEBER, M.D.,

WALTER L. NILES, M.D.,

R. A. COOKE, M.D.

CHARLES E. S. WEBSTER, M.D.,

A. CACCINI, M.D.,

JOHN H. CUDMORE, M.D.,

B. H. SEARING, M.D.,

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WILLIAM D. TYRRELL, M.D.,

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BENJAMIN H. SEARING, M.D.,

J. WALLACE BEVEREDGE, M.D.,

JOHN RADWAY LE COMTE, M.D.

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Chief of Staff.

JAMES C. JOHNSTON, M.D.

Surgeon.

HANS J. SCHWARTZ, M.D.

Assistant Surgeons.

ANDREW J. GILMOUR, M.D.,

EDWARD LOVEJOY, M.D.,

DAVID FLYNN, M.D.,

LOUIS R. MOUNT, M.D.

FACULTY OF MEDICINE.

Department of Otology.

Chief of Staff.

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Assistant Surgeons.

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Surgeons.

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Assistant Surgeons.

DEAS MURPHY, M.D., PERCY W. ROBERTS, M.D.,

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Surgeons.

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ALBERT C. GEYSER, M.D.

Department of Drugs and Supplies.

Apothecary.

GUSTAVE T. RUCKERT, Ph.G.

Assistant Apothecary.

JOHN B. HEUSER, Ph.G.

J. THORN WILLSON,

Managing Clerk of the College,

477 First Avenue.

WALTER R. SHEPHERD,

Bookkeeper.

GENERAL STATEMENT.

The Medical Department of Cornell University was established in 1898. This undertaking, which had been contemplated by the Trustees for several years, was made possible by the gift to the University of a commodious and fully equipped building designed for medical instruction, and by the bestowal of funds for the generous maintenance of a large and vigorous school for higher education in medicine.

The Main College Building comprises a Medical School and Dispensary, with principal entrance on First Avenue, opposite Bellevue Hospital, and occupies the entire block between Twenty-seventh and Twenty-eighth Streets on First Avenue, extending back 100 feet, thus affording an available space of nearly 20,000 feet on each floor. The building is designed in a severe style of Renaissance architecture, and is constructed of Indiana limestone and red brick. See page 125.

The Loomis Laboratory (founded 1886) serves the purpose of undergraduate instruction, in connection with the laboratories in the College building. It has also been reorganized as a research laboratory, and special departments have been established in bacteriology, physiological chemistry, experimental medicine, and pharmacology. Facilities are thus furnished to graduates in medicine who may desire to pursue further study or original research in the various departments of laboratory investigation.

The Animal Hospital on Twenty-sixth Street, adjoining the Loomis Laboratory opposite Bellevue Hospital, is very complete, and follows in equipment as closely as possible the plans of hospitals for human beings. The rooms are large, light and well ventilated, and consist of a well-furnished operating-room, wards with large kennels, bathroom, kitchen, isolation and examination rooms, etc.

The hospital is devoted to teaching operative surgery on living animals. The animals used for the purpose being those with actual surgical conditions requiring relief by operation.

Instruction is not limited to undergraduates, but may also be had by graduates in medicine.



THE LOOMIS LABORATORY

The Metropolitan Street Railroad cars on Twenty-eighth and Twenty-ninth Streets and First Avenue connect with all the other lines of the company, by a system of transfers at Fourteenth, Twenty-third, Thirty-fourth, and Fifty-ninth Streets, and so put all the hospitals in the city within easy access of the College. A convenient station of the Manhattan Elevated Railroad is also at Twenty-eighth Street and Third Avenue. A station of the Subway is at Twenty-eighth Street and Fourth Avenue.

CLINICAL FACILITIES.

The College Dispensary.—One-half of the College building is allotted to the Dispensary, in which ample provision has been made for the accommodation of the various clinical departments, of which there are thirteen, viz.: General Surgery, General Medicine, including the Diseases of the Heart and Lungs, Gynæcology, Diseases of Children, of the Nervous System, of the Genito-Urinary System, of the Skin, Eye, Ear, Nose and Throat, Orthopædic Surgery, Radiography, and Psychopathology.

Each department has been furnished with all the instruments and apparatus necessary for the examination and treatment of patients. A number of small amphitheatres are placed in the Dispensary, so that the clinical instruction provided by the curriculum can be carried on without interfering with the treatment of patients.

The attendance in the Dispensary averages about 500 patients daily, so that the clinical material is abundant and accessible.

Members of the Faculty of Cornell Medical College hold appointments in the hospitals and dispensaries of the city, and are thus enabled to utilize for teaching purposes a great quantity and variety of clinical material. The most important and best of these hospitals are the Bellevue, New York, Presbyterian, German, St. Vincent, Gouverneur, Hudson Street, Willard Parker and Reception Hospitals, and the New York Eye and Ear Infirmary. Others are utilized from time to time, as necessity or opportunity arises. The major part of the bedside and clinical instruction is, however, conducted in Bellevue Hospital, which is directly opposite the College.

This hospital has 900 beds, and receives 24,000 patients annually. It contains an amphitheatre capable of seating 300 students, and also a number of small operating theatres, where section demonstrations in

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surgery and gynæcology are made before the class. Connected with the hospital is a hydropathic establishment, where students are shown the practical applications of baths, douches, massage, etc.

The following clinics are held during the session :

Gynæcology—Monday, 3 P.M.

Professor POLK.

Medicine—Tuesday and Friday, 3 P.M.

Professors THOMPSON, NAMMACK, COLEMAN and others.

Surgery—Wednesday and Thursday 3 P.M.

Professors STIMSON, WOOLSEY and HARTWELL.

Genito-Urinary—Wednesday, 3 P.M., for the latter half of the term.

Professor ALEXANDER.

Nervous Diseases—Friday, 4 P.M.

Professor DANA.

REQUIREMENTS FOR ADMISSION.

The Faculty of the Cornell University Medical College after mature deliberation have concluded that the usual "high school" education so commonly accepted as sufficient preparation for the study of medicine is inadequate. They are of the opinion that candidates for admission to this profession should possess the liberal culture and general education implied by a college degree in Arts or Science. Furthermore the great advances of recent years in all the natural sciences have led to correspondingly great advances in the practice of medicine and surgery. As a result the present four-year course in medicine has become so seriously overcrowded, that, if the teaching of medicine and surgery is to keep pace with the advance in knowledge, the curriculum must be at once revised and extended. Too large a proportion of time is given up to fundamental and non-professional instruction in chemistry, physics, biology and other kindred subjects upon which the knowledge of disease is founded, and too small a proportion to the specialized information which is imperative in the education of a properly equipped physician. The period of four years is deemed sufficient at present if devoted entirely to strictly medical subjects; otherwise it is not. Without attempting to enter into a discussion involving the advantages of a strictly scientific or so-called academic course in arts, philosophy and literature the President and Trustees of Cornell University have decided to adopt the requirements ad-

vised by the Faculty of the Medical College for admission to the course leading to the degree of M.D.

Therefore, in and after 1908 candidates for admission to the Cornell University Medical College must be:

I. Graduates of approved colleges or scientific schools; or

II. Seniors in good standing in Cornell University or in any other approved college or scientific school whose faculty will permit them to substitute the first year of a professional course for the fourth year in arts and science, and who will confer upon them the bachelor's degree upon the satisfactory completion of the first year of the course in the Cornell University Medical College; or

III. Persons who, while not possessing a bachelor's degree, give evidence by examination that they have acquired an equivalent education and a training sufficient to enable them to profit by the instruction offered in the Medical College.

In and after 1909 all candidates for admission to the Cornell University Medical College must have at least such knowledge of physics and inorganic chemistry as may be obtained in college by a year's course in these subjects when accompanied by laboratory work.

Chemistry.—The course in chemistry should include laboratory work, with volumetric analysis and the elements of gravimetric analysis, four to six hours weekly throughout the academic year, and lectures and class-room work in which the principles of chemistry, physical chemistry, and stoichiometry are emphasized. The subject-matter which should be covered is that included in the first 260 pages of the sixth edition of Witthaus' Manual of Chemistry. Though a knowledge of organic chemistry is not expected, a thorough training in inorganic chemistry as outlined above will be exacted as an indispensable preparation to the extended study of organic chemistry required for graduation.

Physics.—The candidate should have followed a course in physics for at least one year. This course should include laboratory work in physical measurements for at least three hours weekly, class-room work four hours weekly, and lectures or demonstrations. The subject-matter which should be covered is that included in the last edition of Nichols and Franklin's Elements of Physics.

In and after 1910 all candidates for admission must possess a knowledge of biology represented by a year's course in invertebrate and vertebrate zoölogy including the morphology.

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Physics, inorganic chemistry and the general subject of Biology occupy so important a relationship to the study of medicine that the Faculty urge as much time as possible in the preliminary education be devoted to them.

Although all "approved colleges or scientific schools" offer courses in the natural sciences, these courses are not always obligatory, and it was felt to be unfair to a few possible students to demand these subjects the first year the new requirements are in operation.

The Trustees also felt that it is unfair to refuse the exceptional student of unusual abilities who has obtained independently an education equivalent to that implied by a degree from a college or scientific school, and there will therefore be examiners appointed from the faculties of the different colleges in the University to determine the qualifications of such as may apply for admission under Rule III. of these requirements.

The committee in charge of the administration of this rule consists of the President of the University and the Deans of the Faculties of Arts and Sciences and of Medicine.

All applications and communications are to be addressed to the Secretary of the Medical College.

Inasmuch as all students of medicine in New York State are required by law to have previously had an adequate preliminary education, and as this preliminary education must be certified to as sufficient by the State Educational Department, it is advisable that applicants for admission send to the Secretary of the Medical College at least a month before entering their degrees or properly attested certificates of graduation from an approved college or scientific school, in order that the Secretary may obtain the requisite "medical student's certificate" from the State authorities.

Admission to Advanced Standing.

Students who have already attended the requisite number of courses in other accredited medical colleges, may be admitted to advanced standing in any one of the years of the four years' course of the Cornell University Medical College, by presenting the requisite Cornell Regents' medical-student certificate and by passing examinations in the subjects described on pages 77-78 as completed, in the year or years previous to that which the student desires to enter. The applicant must also present certificates of having satisfactorily completed laboratory courses equiva-

lent to those required of the Cornell medical students in the year or years previous to that to be entered.

According to law, no student applying for advanced standing from a Medical School which has not been registered by the Regents may obtain a degree on less than two years of medical study in this State.

Admission to Special Courses.

Graduates in medicine, or students who desire to pursue a special course without graduation, are admitted to registration as special students, after approval by the head of the department conducting the course, without Regents' or other preliminary examination. Such special courses do not count in any way as part of the four years' course required of candidates for the degree of doctor in medicine. Further information regarding such courses, fees, etc., may be obtained by addressing the Secretary of the Cornell University Medical College, First Avenue, 27th to 28th Street, New York.

Amendment to Medical Law, 1902.

At their meeting, July 1, 1901, the Regents took the following action:

Voted, That, beginning with the September, 1901, medical licensing examinations, a recent photograph of each candidate be required as a part of the application for admission.

In accordance with the medical law, the Regents admit conditionally to the tests in anatomy, physiology, hygiene, and sanitation and chemistry, applicants 19 years of age certified as having studied medicine not less than two full years of at least seven months each, in two different calendar years, in a medical school registered as maintaining at the time a satisfactory standard; provided that such applicants are of good moral character, have the requisite preliminary education, and pay the fee of \$25; the final examinations in surgery, obstetrics, and gynecology, pathology including bacteriology, and diagnosis, to be passed after having finished the full period of study and having received the medical degree.

Candidates who have studied medicine not less than the minimum period of two years, whether undergraduates or graduates in medicine, are admitted conditionally as aforesaid to the examinations in anatomy, physiology, hygiene, and sanitation, and chemistry; if such applicants fail to attain 75 per cent. in one or more of these topics they must be reexamined in all topics and must wait at least six months before reexamination; and candidates failing to obtain at least 75 per cent. in one or more of the topics at the final examinations, after having passed in the preliminary topics, must be reexamined in all of the final topics and must wait at least six months before reexamination.

The Regents may, in their discretion, accept as the equivalent of the first year in a registered medical school evidence of graduation from a registered college course, provided that such college course shall have included not less than the minimum requirements prescribed by the Regents for such admission to advanced standing.

**REQUIREMENTS FOR LICENSE TO PRACTICE MEDICINE
IN THE STATE OF NEW YORK.**

All requirements for admission should be filed at least one week before examination.—They are as follows:

1. Evidence that applicant is more than twenty-one years of age (Form 1).
2. Certificate of moral character from not less than two physicians in good standing (Form 1).
3. Evidence that applicant has the general education required preliminary to receiving the degree of bachelor or doctor of medicine in this State (medical-student certificate. See examination handbook).
4. Evidence that applicant has studied medicine not less than four full school years of at least seven months each, in four different calendar years, in a medical school registered as maintaining at the time a satisfactory standard. New York medical schools and New York medical students shall not be discriminated against by the registration of any medical school out of the State, whose minimum graduation standard is less than that fixed by statute for New York medical schools.

First exemption: "The Regents may in their discretion accept as the equivalent for any part of the third and fourth requirements, evidence of five or more years' practice of medicine, provided that such substitution be specified in the license."

5. Evidence that applicant "has received the degree of bachelor or doctor of medicine from some registered medical school, or a diploma or license conferring full right to practice medicine in some foreign country" (Form 2 of original credentials).

6. The candidate must pass examinations in anatomy, physiology, hygiene and sanitation, chemistry, surgery, obstetrics and gynecology, pathology, including bacteriology and diagnosis, therapeutics, practice, and materia medica. The questions "shall be the same for all candidates."

Second exemption: "Applicants examined and licensed by other State examining boards registered by the Regents as maintaining standards not lower than those provided by this article, and applicants who matriculated in a New York State medical school before June 5, 1890, and who received the degree of M.D. from a registered medical school before August 1, 1895, may, without further examination, on payment of \$25 to the Regents, and on submitting such evidence as they may require,

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receive from them an indorsement of their licenses or diplomas, conferring all rights and privileges of a Regents' license issued after examination."

7. A fee of \$25 payable in advance.

Examinations for license to practice medicine in this State will be held as follows:

	1908.	1909.	1910.
Winter		Feb. 2-5	Feb. 1-4
Spring	May 19-22	May 18-21	May 24-27
Summer	June 23-26	June 22-25	June 28-July 1
Autumn	Sept. 22-25	Sept. 21-24	Sept. 27-30

Places.

New York, Albany, Syracuse, Buffalo.

CHARGES FOR INSTRUCTION.

First Year.

Registration*	\$5 00
Tuition	150 00
Laboratory fees	35 00
	————— \$190 00

Second Year.

Tuition	\$150 00
Laboratory fees	35 00
	————— \$185 00

Third Year.

Tuition	\$150 00
Laboratory fees	35 00
	————— \$185 00

Fourth Year.

Tuition	\$150 00
Laboratory fees	25 00
Graduation fees	25 00
	————— \$200 00

Each student is required to pay to the clerk of the College the follow-

* The registration fee is payable only once, on entrance.

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ing amounts to cover breakage in the Laboratories and Dispensary departments:

1st year, Laboratory and Dispensary	\$10 00
2d year, Laboratory and Dispensary	15 00
3d year, Laboratory and Dispensary	10 00
4th year, Dispensary	5 00

These deposits, less the amount charged for breakage, will be returned at the end of each year.

Tickets must be taken out and paid for at the beginning of the session.

SPECIAL STUDENTS.

Special students, on the recommendation of the head of the department concerned, may be admitted to any of the courses of instruction offered in the College, or to any course of instruction especially provided, on the payment of a registration fee of five dollars and a tuition fee of twenty-five dollars.

The graduation fee is payable on registering for graduation. The tuition fees for the first two years at Ithaca are identical with those of the same period in New York. All fees are payable at the beginning of the term, but in special cases they may be paid semi-annually in advance. No rebate will be made in any case.

No remission of laboratory fees will be made because of previous instruction elsewhere in the subjects.

EXPENSES OF STUDENTS.

The following estimate of the annual expenses of a candidate for a degree in the Medical School is based on the statements of students:

	<i>Low.</i>	<i>Average.</i>	<i>Liberal.</i>
Matriculation (once only)	\$5 00	\$5 00	\$5 00
Tuition (as at present fixed)	190 00	190 00	190 00
Books	16 00	28 00	35 00
Chemical apparatus	4 00	5 00	6 00 up
Room	92 00	130 00	190 00 "
Board	124 00	129 00	147 00 "
Clothes and laundry	59 00	80 00	112 00 "
College incidentals	16 00	21 00	24 00 "
Other expenses	46 00	74 00	98 00 "
Graduation fee (last year)	25 00	25 00	25 00
Total	\$577 00	\$687 00	\$832 00

GENERAL STATEMENT OF THE PLAN OF INSTRUCTION

The chief features in the scheme of instruction are through laboratory training in all the subsidiary branches, daily recitations from standard text-books, clinical teaching in dispensaries and at the bedside in hospitals, and enough didactic lectures to make clear the general principles and conflicting theories in the practice of medicine and surgery. All students in any one class advance simultaneously in the various subjects, and no section or group works apart from any other, thereby losing the opportunity to appreciate the relationship of the different subjects which at any given time may be under discussion. Allowance, however, has been made for those who through natural endowments or superior energy or previous education can outstrip their less fortunate fellows. A careful record is kept of the attendance and character of the work of every student, and by this means at the end of the year each is placed in the section to which this record entitles him. A system of electives in clinical, laboratory, and recitation work is also provided, which it is the aim of the Faculty to enlarge as opportunities arise. A student is required to master all the subjects taught in any given year before being allowed to advance to the next, as the knowledge acquired in each year is necessary for a proper understanding of that which follows. Examinations are held at the end of each session; a failure to pass not more than two subjects, one of which at least must be a laboratory subject, is allowed in the spring, but every subject must be satisfactorily passed at the beginning of the next ensuing college year, or the applicant will be compelled to repeat the work of the preceding year.

The essential feature of the entire system is the division of the classes of the several years into small sections for recitations, demonstrations, laboratory exercises, and for clinical instruction in the college dispensary, and in the wards of the numerous hospitals attended by the members of the Faculty.

The following is a statement of the curriculum in each of the four annual sessions necessary to obtain the degree of M.D., and attention is called to the careful arrangement of the instruction in time and correlation in subject-matter so as to provide for a proper understanding and assimilation of the knowledge imparted in the different departments.

If a student, without neglecting his required schedule work, desires to take advanced work and can make an opportunity to do this, without interfering with the work of other students, he shall be permitted to do so and shall receive credit for it.

The first year is devoted to anatomy—several consecutive uninterrupted hours being provided for dissection—normal histology, chemistry, physics, embryology, and pharmacology. During the first half of the first year every afternoon is largely devoted to the study of gross anatomy. In the second half the major portion of anatomy is supposed to have been mastered, and much of the time previously allotted to this subject is given to normal histology and embryology, and to an extensive course in comparative morphology.

The general principles of mechanics, hydrostatics, optics, electricity, heat, and acoustics, and their application to medicine, are taught in lectures illustrated by experiments. Inorganic chemistry is studied in the laboratory throughout the year. The class is divided into small sections, each of which must attend daily one or more recitation exercises in anatomy, histology, and chemistry. These follow as closely as possible the practical work.

Students who have had the advantage of a thorough preliminary education in physics and chemistry before entering the medical school, after satisfactorily demonstrating to the professor in charge of this department, by examination or otherwise, that they are familiar with the work of the first year, may be excused from attendance upon these subjects. In their place they must elect at least one of the following courses given in the second year—namely, laboratory pharmacology, or physiological chemistry.

During the second year anatomy, physiology, and chemistry are completed, and the study in text-books of medicine, surgery, obstetrics, and pathology is begun. The gross anatomy of the nervous system is taught at the outset of the year by demonstrations to small groups of students. The demonstration of these organs is followed as closely as possible by the study of them in the histological laboratory during the first half of the session. The lectures and recitations in physiology

follow the same course, and, in connection with the study of the gross and histological aspects of the parts under discussion, are more fully comprehended. Organic and physiological chemistry are studied in the laboratory and by lectures and recitations throughout the year. At the same time a laboratory course in pharmacology is pursued, familiarizing the student with the physical and chemical properties of drugs. Bacteriology is begun, the student commencing with the preparation and care of media and the recognition of the gross and microscopical characteristics of micro-organisms.

During the first few weeks of the term lectures are delivered upon the general principles of pathology, with particular reference to the elucidation and classification of the various forms of inflammation. The substance of these lectures will form the basis of the subsequent instruction in this subject in all departments, and thus insure uniformity in the teaching and understanding of the causes of disease. These lectures are supplemented by autopsies before small sections to demonstrate gross lesions. Having obtained some knowledge of pathology, the student by means of recitations is made familiar with the principles of surgery, medicine, and obstetrics.

Students who have completed elsewhere courses in physiological chemistry or pharmacology equivalent to those of the second year, may by passing examinations at the beginning of the term be excused from further attendance upon them.

Students thus excused from part of the second-year work and those who have been allowed electives in their first year may take one or both of the following elective courses during their second year—namely: 1. Manikin course in obstetrics. 2. Obstetrical clinic. The two latter elective courses are in preparation for the required work in practical obstetrics, which, usually taken in the third, can thus be taken during the second summer if desired.

Students are allowed to take the State Board licensing examinations in the primary subjects at the end of the second year. Those intending to reside in this State are encouraged to avail themselves of this opportunity.

In the third year medicine, surgery, materia medica, therapeutics, and obstetrics are studied systematically from text-books and practically at the bedside in the dispensary, and in general clinics. A sufficient number of didactic lectures are given by the Professors of Medicine and Surgery at the beginning of the session to explain general principles in

symptomatology and diagnosis. Throughout the year the class must attend in small sections one or more daily recitations from standard text-books upon subjects previously assigned and learned. Pathology is studied in greater detail than previously, both in the laboratory and in the dead-house, and as far as possible morbid processes are demonstrated in advance of the study of the disease in the text-book or its clinical presentation.

In conjunction with the bedside teaching, instruction is given in all of the modern laboratory aids in diagnosis classified under the term of clinical pathology.

Students in groups of ten or twelve are taught the methods of examining patients for the detection of abnormal physical signs, and at the close of the session are expected to be familiar with the recognition and treatment of the common diseases and be conversant with the fundamental subjects of a medical education. The specialties taken up in this year are neurology, pediatrics, toxicology, and gynecology. They are taught by clinical lectures as part of the general subjects of the practice of medicine, surgery, and obstetrics.

The fourth year is devoted chiefly to the study of diagnosis and treatment of disease at the bedside, in the dispensary, and in clinics. There are as few lectures as are consistent with the proper exposition of the chief problems confronting the profession, and these are delivered at the outset of the term, in order that the student may become familiar as soon as possible with the facts which are to be taught practically. For example, to the Professor of Medicine ten didactic lectures are assigned. This proportion has to be exceeded somewhat in therapeutics, obstetrics, and the specialties, but many of these lectures are illustrated by the presentation of typical cases and are really clinics. The clinical instruction in surgery is supplemented by an operative course in which the student performs upon the cadaver all the common operations. Particular attention is also given to the methods of making medical and surgical diagnoses, and in this connection constant use is made of the bacteriological and chemical laboratories, where the student examines specimens taken at the bedside during one exercise, and reports the results to the class at the next.

Hygiene and its application in the province of the physicians and public health officer is taught by lectures supplemented by demonstrations of the plans and methods of the city health board.

The major part of the theoretical instruction, as in the previous years,

is given by recitations in the subjects of medicine (including neurology), surgery (including orthopædic surgery and genito-urinary diseases), therapeutics, and gynæcology.

The instruction in the specialties, which is made the distinguishing feature of this final year, is begun with a few clinical lectures, and is continued by a course in the examination and treatment of dispensary patients by each student. Every one receives from fourteen to twenty-eight hours of this training (the number varies somewhat with the subject), and should become reasonably proficient in the use of instruments, the ability to make diagnoses and give relief. There is no attempt made to produce experts, but each one before graduation must know enough about the specialized branches of medicine to be a competent general practitioner.

Every student must personally attend a definite number of cases of labor, and for this purpose the maternity service open to the college offers excellent opportunities. The Faculty earnestly recommend that this work be accomplished in the summer, preferably of the third year; by the proper choice of electives it is possible in the second summer, but this is not as desirable or profitable. If taken during the regular winter session much loss in other work may result. Those who for any proper reason cannot take this course as advised in the summer, might, however, succeed in obtaining the necessary cases during the winter by selecting odd hours when not engaged in section work, and by arrangement with the office to receive telephone calls.

To meet the requirements of hospital and other boards of examination, such as those of the civil service or of the army and navy, students who wish to compete in these examinations may elect in the fourth year to have all their recitation exercises with special instructors appointed by the faculty. A separate fee is required for this service. There will in addition be elective practical courses in the dispensary as opportunity arises.

DETAILS OF THE PLAN OF INSTRUCTION.

ANATOMY.

GEORGE WOOLSEY, M.D., *Professor of Anatomy.*

IRVING S. HAYNES, M.D., *Professor of Practical Anatomy.*

WILLIAM F. STONE, M.D., *Instructor.*

Demonstrators of Anatomy.

WILLIAM F. STONE, M.D.,

JOHN F. CONNORS, M.D.,

FRANK S. FIELDER, M.D.,

JOHN J. NUTT, M.D.,

BURTON J. LEE, M.D.,

SEWARD ERDMAN, M.D.,

F. M. PAUL, M.D.

Commencing with the class entering in October, 1908, the study of Anatomy will be largely concentrated in the first year, and especially in the first half of the year. During this year the work in anatomy consists of a laboratory course conducted in the Dissecting Room at stated hours, and of a course on the Surgical Anatomy of Bones and Joints. The anatomy of the entire body is studied by recitations, study of the bones and dissected specimens, dissection, demonstrations, quizzes, and practical examinations.

The required work of the year is divided into 5 courses.

Students who complete one or more of the 4 required practical courses in a manner satisfactory to the Professor of Practical Anatomy in less than the maximum time allowed for such course will be assigned at once to the next course.

In this way by diligent application to the work in Anatomy a student may complete the required courses in considerably less time than the maximum time allowed. Time thus gained must be spent in the Anatomical or other Laboratories of the College. It is earnestly recommended that such students elect to repeat the course in dissection or at least that part of it which was first completed.

Students who choose to spend the time gained in the Anatomical Laboratory may elect to review the required work or to take up some special line of investigation. Every facility will be offered such work-

ers to obtain the greatest benefit from such additional work. The order of study and dissection given has been adopted partly so that students when they take up the Histology of the viscera may have a knowledge of their gross anatomy.

Courses Required for a Degree.

COURSE 1.—UPPER EXTREMITY.

(A) Osteology and Arthrology of the upper extremity.

Study of bones and specimens. Demonstrations. Daily recitations. Three hours daily for 1 week or less.

(B) Study of the dissected upper extremity.

Demonstrations and daily recitations and quizzes.

Three hours daily for 1 week or less.

(C) Dissection of the upper extremity. Study demonstrations and daily recitations or quizzes.

Three hours daily for 4 weeks or less.

COURSE 2.—THORAX AND ABDOMEN, with the contained viscera and the Perineum and External Genitals.

(A) Osteology and Arthrology of Spine, Thorax and Pelvis.

Study of bones and specimens. Demonstrations. Daily recitations and quizzes.

Three hours daily for 1 week or less.

(B) Study of the Perineum, External Genitals, Thoracic and Abdominal Walls and Viscera, upon prepared specimens and models, with demonstrations and daily recitations.

Three hours daily for 2 weeks or less.

(C) Dissection of the part, with daily recitations or quizzes. Demonstrations.

Three hours daily for three weeks.

COURSE 3.—LOWER EXTREMITY.

Arranged similarly to Course 1. Time 6 weeks or less.

COURSE 4.—HEAD AND NECK.

(A) Osteology and Arthrology of the bones of the head.

Study of bones and specimens. Demonstrations. Daily recitations and quizzes.

Three hours daily for 1 week or less.

(B) Study of dissections of the head and neck.

Demonstrations and daily quizzes or recitations.

Three hours daily for 1 week or less.

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(C) Dissection of the head and neck, with study, demonstrations and daily quizzes.

Three hours daily for 2 weeks or less.

(D) Eye, Ear, Nose, Mouth, Pharynx, Larynx, Brain and Spinal Cord. Study of specimens, demonstrations, dissection and daily quizzes.

Three hours daily for 3 weeks or less.

COURSE 5.—Lecture and demonstration course on the Surgical Anatomy of Bones and Joints, with special reference to Fractures and Dislocations.

Two hours weekly, second half of the year.

Courses During the Second Year.

COURSE 6.—Review recitation course.

Two hours weekly throughout the second year.

COURSE 7.—Lecture and demonstration course on Surgical Anatomy. Second year, 60 to 75 hours.

The courses on Surgical Anatomy are not given until the last half of the first year, and in the second year when the student has such a knowledge of Anatomy that he can understand and appreciate them. They illustrate the application of Anatomy to the study and practice of Medicine and Surgery. Such practical applications serve as pegs on which to hang the knowledge of important anatomical facts.

Standing and Examinations.

At the end of the first year a student's standing will be computed from his work in recitations, dissections, the oral examinations upon the cadaver, and a written examination at the end of the year.

At the end of the second year a student's standing will be computed from his year's work in recitations and his mark at the final examination in Anatomy at the end of the year.

Failure to give satisfaction in dissection necessitates the redissection of the part.

Failure in oral examinations on the cadaver requires a reëxamination within two weeks.

A second failure requires a redissection of the part and an examination upon it.

Prepared bones are loaned to students during the session from a large collection kept for this purpose.

CORNELL UNIVERSITY MEDICAL COLLEGE.

Advanced, Special, and Post-Graduate Courses.—Facilities are offered to students and the medical profession for pursuing advanced, special, and post-graduate courses in practical anatomy.

SUMMARY.*

	<i>First Year.</i>	<i>Second Year.</i>
Laboratory course (including Recitations, Dissection and Demonstrations)	510 hours.	
Lectures	30 hours.	75 hours.
Recitations		60 hours.

Text-Books—Cunningham or Gerrish, second edition.

Collateral Reading—Piersol; Morris; Gray; Quain; Woolsey, *Applied Surgical Anatomy*.

Dissecting Manuals—Cunningham's *Dissector*, 2 vols., or Hughes and Keith, *Manual of Practical Anatomy*, 3 vols.

PHYSIOLOGY.

Professor of Physiology

Assistant Professor,

JOHN A. HARTWELL, PH.B., M.D.

Assistants.

JOSEPH S. WHEELWRIGHT, M.D.,	HORATIO B. WILLIAMS, M.D.,
ROBERT A. COOKE, M.D.,	J. F. COWAN, A.B.

Instruction in this branch is given by systematic and practical demonstrations and recitations to first-year* students during the second half of the session, and to second-year students during the first half of the session. During the second half of the session, review recitations, covering the entire first-year and second-year courses, are held once a week for the second-year class, as a preparation for the final college and the State examinations.

As a preparation for the study of physiology proper, first-year stu-

* This and the following summaries represent the total number of hours for each student.

dents, during the first half of the session, receive instruction in the gross anatomy of the thoracic and abdominal viscera, by section demonstrations in the department of Practical Anatomy. The histology of the heart and blood-vessels, respiratory organs, alimentary canal, and glandular organs is taught in the laboratory and by recitations.

The regular second-year work in physiology is given during the first half of the session. Second-year students receive laboratory instruction in physiological chemistry in the department of Chemistry, Physics, and Toxicology. The same department gives instruction in optics and acoustics to first-year students, which serves as a preparation for the study of vision and audition in the second year. Second-year students receive laboratory instruction from the department of Histology in the histology of the nervous system and the organs of special sense. They also receive instruction from the department of Anatomy in the anatomy of the encephalon and cranial nerves, and from the department of Histology in the functional traits in the central nervous system.

Demonstrations.—The regular demonstrations for the first-year* class begin about the middle of January, and are continued three times weekly until the close of the session, on the following subjects and in the order named: The cell, blood, circulation, respiration, digestion and absorption, secretion and excretion, general metabolism, and animal heat and force. The regular demonstrations for the second-year class begin at the opening of the session, and are continued three times weekly until about the middle of January, on the following subjects and in the order named: The nervous system and the special senses. The demonstrations throughout are a combination of didactic lectures and practical illustration, the didactic method being used only in those circumstances where demonstrations before the class would fail to completely present the subject.

Throughout the entire course the subject of human physiology proper is fully covered; special attention is paid to its applications to the practice of medicine and surgery, much time being devoted to what may be called applied physiology.

Recitations, Section Work, etc.—Certain of the work in the histological laboratory is practically a part of the instruction in physiology. For first-year students, this includes laboratory work and recitations on the cell and karyokinesis, ciliary movements, blood, the histology of the simple tissues, heart, and vessels, respiratory system, digestive sys-

* See note at the end of the section.

tem, glandular organs, and the cellular mechanism of secretion. For second-year students the instruction includes a study, in the same manner, of the nervous system, organs of special sense, and the genito-urinary system. The instruction in physiological chemistry is given in the department of Chemistry to second-year students. It includes lectures upon physiological chemistry, laboratory work, and recitations on the carbohydrates and fats, proteids and albuminoids, food-stuffs, and the digestive secretions, endosmosis and exosmosis, and the chemistry of blood, bile, urine, and the simple tissues.

A laboratory course of forty hours is given to the first-year students on the subject of Embryology. This is under the supervision of the department of Pathology.

In addition to the work in histology and physiological chemistry, and in close connection with the lectures on physiology proper, the Instructors give, three hours weekly, recitations, with frequent demonstrations and practical exercises, to each class, divided into sections of convenient size, for first-year students during the second half of the session, and for second-year students during the first half of the session.

In the section-teaching, many demonstrations, by means of specimens, models, and apparatus, will be given which cannot with advantage be made before the entire class, such as blood-counting, the capillary circulation, blood-pressure, the use of the sphygmograph, the general physiology of nerve and muscle, etc.

In the course of the section-work, students who prove themselves capable may be permitted to aid in the preparation and giving of the demonstrations when this does not interfere with other exercises, this corps of student-assistants being changed from time to time, so that the privilege may be extended to as many as possible.

SUMMARY.

Demonstrations	120 hours.
Recitations	120 hours.

[Owing to the changes necessitated by the advanced requirements for admission in 1908 no physiology will be taught to first-year students, the whole course having been transferred to the second year. The announcement for the Session of 1909-10 will give the details of this course.]

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Text-Book—Kirke, *Handbook of Physiology*, twentieth English edition, 1904.

Collateral Reading—Schäffer, *Text-Book of Physiology*; Stewart; Foster; Howell. Flint, *Handbook of Physiology*.

ALLIED BRANCHES.

Physiological Chemistry (see department of Chemistry, Physics, and Toxicology).

Embryology (see department of Pathology).

CHEMISTRY, PHYSICS, AND TOXICOLOGY.

RUDOLPH A. WITTHAUS, M.D., *Professor of Chemistry.*

Assistant Professor,

IVIN SICKELS, M.D.

Instructors,

LOUIS W. RIGGS, Ph.D.,

CHARLES G. L. WOLF, M.D.

Assistant,

E. OSTERBERG,

Lectures.—Students of the first year will receive three lectures each week on physics, the divisions of the subject being considered in the following order: General properties of matter and force, mechanics, hydrostatics, pneumatics, optics, electricity, heat, and acoustics. The lectures will be abundantly illustrated, and the relations of physics to surgery and medicine will be particularly considered.

During the second year, students will attend two lectures weekly. Organic chemistry will be considered in the earlier part of the term to an extent sufficient to impart a knowledge of the principles of combination of the carbon compounds and the properties and relationships of those which are of physiological, toxicological, or therapeutical interest. The lectures during the latter part of the second year will be upon physiological chemistry.

During the third year one lecture will be given weekly on toxicology for twenty weeks. In these lectures the medical and medico-legal bearings of the subjects will be chiefly considered.

Recitations.—Students of the first year will recite twice each week on the principles of chemistry and mineral chemistry. Those of the second year will recite once weekly during the first eighteen weeks of

the session, and twice weekly thereafter, on organic and physiological chemistry.

Laboratory Work.—Laboratory instruction will be given students of the first year four hours weekly during the session. This course will consist of an experimental study of the commoner elements and compounds in illustration of the recitation course, and of training in the processes of quantitative analysis of inorganic substances, and mineral poisons.

Students of the second year will receive laboratory instruction two hours weekly until February 14th, and four hours weekly after that date in physiological and clinical chemistry and organic toxicology.

Each student is fully supplied with all apparatus and chemicals required, except urinometers, which are carefully corrected for the student that they may serve for future use.

These courses are conducted by the instructors under the direction of the Professor of Chemistry and Physics.

First-year students presenting satisfactory evidence of having performed equivalent work in chemistry and physics may be excused from first-year work in this department, and be given advanced laboratory work equivalent in hours to that omitted.

SUMMARY.

	<i>First Year.</i>	<i>Second Year.</i>	<i>Third Year.</i>
Recitations	60 hours.	45 hours.	
Laboratory	120 hours.	84 hours.	
Lectures	90 hours.	60 hours.	20 hours.

Text-Books—Witthaus, *Manual of Chemistry*, sixth edition; Riggs, *Laboratory Manual*.

Collateral Reading—Wolf, *Laboratory Handbook*; Ganot, *Physics*.

PHARMACOLOGY AND MATERIA MEDICA.

Professor of Pharmacology and Materia Medica.

ROBERT ANTHONY HATCHER, PH.G., M.D.

Instructors,

CHAS. E. S. WEBSTER, JR., M.D., WILLIAM J. JONES, M.D.,
ARCHIBALD E. CHASE, M.D., HAROLD C. BAILEY, M.D.

The course extends through all four years of the curriculum.

CORNELL UNIVERSITY MEDICAL COLLEGE.

FIRST YEAR.

Materia Medica, Prescription Writing, and Pharmacy.

Lectures and Recitations.—One hour a week. The physical and chemical properties of crude drugs and their preparations will be discussed in informal lectures and in recitations, and Prescription Writing will receive attention.

Laboratory.—Two hours a week for the second half of the year. Preparations embracing the different pharmaceutic classes will be made, and consideration will be given to the more common incompatibilities to be avoided in prescriptions. A few preparations will be made to demonstrate the simplicity of certain processes often deemed difficult, or impossible except by means of special apparatus. A part of the time will be devoted to the physical examination of specimens from the materia medica museum (Pharmacognosy).

Each laboratory exercise will be preceded by an informal discussion of the work to be done.

SECOND YEAR.

Pharmacology.

Lectures.—One hour a week will be devoted to Systematic Pharmacology. The lectures will be illustrated in part by demonstrations and by tracings taken from research experiments.

Laboratory.—Six hours a week for the second half of the year (Pharmacodynamics). The experiments are designed to illustrate a wide range of pharmacologic action, the more important agents being considered from several standpoints.

THIRD YEAR.

Pharmacology and Materia Medica.

Recitations.—One hour a week. The Pharmacology of the second year will be reviewed, and Materia Medica will be treated with special reference to dosage, therapeutics and toxicology.

Prescription writing will be taught.

Each student will be required to submit a satisfactory abstract from the literature of a pharmacologic research.

FOURTH YEAR.

Applied Pharmacology.

Lectures.—One hour a week. The Therapeutics of the more im-

portant remedies will be treated with reference to their pharmacologic action.

ELECTIVE.

FIRST YEAR.

Advanced Pharmacy.

Laboratory.—A more extensive knowledge of Pharmacy than that given in the first year, although desirable, is not essential to the medical student. Opportunity will be afforded for extending the regular course and for the chemical examination of vegetable drugs.

SECOND, THIRD, AND FOURTH YEARS.

Research.

Students will be encouraged to conduct original research under the immediate supervision of the Professor of Pharmacology. Such work affords a valuable insight into pharmacologic methods, and assists in the formation of a correct estimate of the original work of others.

SUMMARY.

	<i>First Year.</i>	<i>Second Year.</i>	<i>Third Year.</i>
Lectures	30 hours.	30 hours.	
Recitations			30 hours.
Laboratory	30 hours.	90 hours.	

Text-Book—Sollmann, *A Text-Book of Pharmacology*.

Collateral Reading—Cushny, *Pharmacology and Therapeutics*; Schmiedeberg, *Pharmacologie*; Heinz, *Handbuch der experiment. Path. und Pharmacologie*; Kobert, *Lehrbuch der Intoxicationen*; Hatcher and Sollmann, *A Text-Book of Materia Medica*; Coleman, *A Syllabus of Materia Medica*; Caspari, *Treatise on Pharmacy*.

MEDICINE.

W. GILMAN THOMPSON, M.D., *Professor of Medicine.*

Professors of Clinical Medicine,

ALEXANDER LAMBERT, M.D.,

CHARLES E. NAMMACK, M.D.,

WARREN COLEMAN, M.D.,

LEWIS A. CONNER, M.D.

CORNELL UNIVERSITY MEDICAL COLLEGE.

THOMAS WOOD HASTINGS, M.D., *Professor of Clinical Pathology.*

Instructors and Assistants,

C. N. BANCKER CAMAC, M.D.,	JOHN W. COE, M.D.,
MONTGOMERY H. SICARD, M.D.,	WALTER L. NILES, M.D.,
FREDERICK L. KEAYS, M.D.,	NATHANIEL R. NORTON, M.D.,
THEODORE B. BARRINGER, M.D.,	MORTIMER WARREN, M.D.,
BERT R. HOOBLER, M.D.,	HUGHES DAYTON, M.D.,
JOHN H. RICHARDS, M.D.,	WALTER A. DUNCKEL, M.D.

The Course of Medicine comprises a graded plan of study extending throughout three years. General didactic lectures upon the practice of medicine are wholly supplanted by bedside and dispensary instruction and recitations. The course includes the following subdivisions:

Second Year:

Recitations from a text-book upon elementary medicine, with written reviews.

Third Year:

1. Recitations from an advanced text-book, with written reviews
2. Physical diagnosis of the heart and lungs.
3. History-recording.
4. Bedside course in symptomatology.
5. Dispensary course in general medicine.
6. Clinical pathology.
7. Twenty lectures on symptomatology.
8. Hospital medical clinics.

Fourth Year:

1. Advanced bedside study in symptomatology, diagnosis, and treatment.
2. Demonstrations of patients by the student before the class in the out-patient clinic.
3. Physical diagnosis.
4. Hospital medical diagnosis clinics.
5. Ten lectures upon diatheses, toxæmias, etc.
6. Elective advanced work in clinical diagnosis, clinical pathology, history-recording, etc.
7. Recitations in medicine.

The details of the methods of instruction in medicine for each year of the curriculum are as follows:

SECOND YEAR.

Recitations.—Second-year students begin the study of medicine with systematic recitations twice each week from an elementary text-

book, in which the subjects of nomenclature, etiology, morbid anatomy, and typical symptoms only are dwelt upon.

THIRD YEAR.

Recitations.—Third-year students recite twice each week from an advanced text-book on the Practice of Medicine, special emphasis being given to symptomatology, complications, diagnosis, and treatment.

Written reviews are held at intervals to familiarize the student with examinations. All recitations are obligatory, and the recitation marks received form an important component of the final examination marks of the year.

Ward Work.—Systematic and obligatory ward work is begun in classes not exceeding fifteen students each, who accompany the Professors of Clinical Medicine on rounds through the hospital wards. Examples of all the common diseases are studied, and the student has opportunity personally to examine many cases of disease in different stages of development, and of following their daily progress. A special course in general medical diagnosis is given at the bedside, in which the student observes cases illustrating all the important physical examinations.

Dispensary Classes.—Students in small classes are instructed in general medical diagnosis by Dr. Barringer and Dr. Dayton in the new Out-Patient Department of Bellevue Hospital.

Clinical Laboratory Courses are conducted in immediate connection with the study of hospital and dispensary cases.

The laboratory is designed to meet the three requirements of:

(1) *Teaching*; (2) *Original Research*, and (3) *Diagnosis*.

(1) *Teaching.* The third-year class is divided into small sections, so that each member receives the personal assistance of the demonstrator. At the conclusion of the course a written and practical examination is held, and the result of this, as well as the character of the work done by each student, is included in the general average mark received by him in medicine. When assigned to cases at the general medical clinic in the fourth year the student is required to report the result of his examination of the sputum, blood, urine, etc.

The apparatus employed may readily be transported to the bedside, the work being thus essentially practical, and the student *himself* uses it so that he may become familiar with its care and application.

CORNELL UNIVERSITY MEDICAL COLLEGE.

The course comprises the thorough study of the sputum, blood, gastric contents, fæces, urine, exudates and transudates.

Each student is furnished typical specimens which he stains and studies at the demonstrations.

(2) *Original Research.* Facilities are offered to graduate and undergraduate special students for the undertaking and publication of original investigations.

(3) *Dispensary, Hospital, and Clinical Laboratory Examinations.* The laboratory is a working part of the Cornell Dispensary. The visiting staff of this Dispensary, as well as that of the Second Division of Bellevue Hospital, use the laboratory extensively for completing the data of their cases. Students who have completed their third year, and whose standing is good, may, under the supervision of the instructors, employ their summer months in following this work in the laboratory.

Physical Diagnosis.—Physical diagnosis of the chest is taught in classes not exceeding a dozen students each. This course of 30 lessons for each class is very comprehensive, owing to the large number of patients in the class of heart and lung diseases at the College Dispensary and in the wards and Out-Patient Department of Bellevue Hospital.

The work consists of the study of:

- (1) Medical anatomy of the normal thorax and abdomen and physical signs of the contained viscera.
- (2) Pathological conditions of the thoracic and abdominal viscera with special reference to Methods of Physical Examination; Physical Signs in Disease.

General Medical Clinics.—Students of the third year are required to attend a clinic in general medicine conducted by Professor Lambert (commencing in December), and also the clinic in medical diagnosis conducted by Professor Thompson, and the clinics in general therapeutics, as described for the fourth year. These clinics are held weekly in the amphitheatre of Bellevue Hospital.

Lectures.—A course of twenty lectures upon general symptomatology is given by the Professor of Medicine, which is designed as introductory to the systematic bedside teaching which he conducts upon hospital rounds.

FOURTH YEAR.

Bedside Instruction is given by the Professor of Medicine to sections not exceeding fifteen students, in the wards of the Presbyterian Hospital until January 1st, and in those of Bellevue Hospital thereafter, throughout the year. In these sections each student is assigned in turn to special cases for thorough study. Ward classes are also conducted by Dr. Conner at the Hudson Street Hospital, and by Drs. Lambert and Nammack in Bellevue Hospital.

Clinics.—Medical clinics are held weekly in the amphitheatre of Bellevue Hospital by the Professor of Medicine. At these clinics students read written histories of cases which they have previously studied in the hospital wards. They are required to demonstrate their findings upon the patient, and are questioned before the entire class in regard to diagnosis and treatment. These clinics are also utilized by the Professor of Medicine to exhibit cases of exceptional rarity or difficult diagnosis, and a few of them are conducted in coöperation with the Professor of Surgery in order to present to the students the value of conjoint medical and surgical points of view in appropriate cases. A second general medical clinic is held weekly in the Bellevue amphitheatre by the Professor of Therapeutics, at which the effects of treatment are made the prominent feature.

An out-patient clinic is also held weekly by the Professor of Medicine in the Dispensary of the College, at which students are given ample opportunity to examine patients, study minor ailments, as well as all the forms of disease in the ambulatory cases of a large and varied clinical service.

Dispensary Classes, comprising a dozen students each, are conducted in periods of five weeks for two hours twice a week. The students are taught methods of complete general physical examination, diagnosis, prognosis and treatment, and of history recording. Opportunity is afforded to follow the progress of cases from week to week, and to make clinical examinations of the sputum, blood, etc., in each case.

Lectures.—A course of ten lectures is given by the Professor of Medicine upon such general topics as the diatheses, toxæmias, auto-intoxication, cachexias, etc. Lectures are also given by Dr. Conner upon the Internal Secretions, and Dr. Camac upon (1) diabetes and allied conditions, and (2) the muscular and nervous systems of the heart clinically considered.

CORNELL UNIVERSITY MEDICAL COLLEGE.

An elective course in advanced clinical pathology and diagnosis is offered in the fourth year.

SUMMARY.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		20 hours.	10 hours.
Recitations	45 hours.	60 hours.	30 hours.
Clinics		46 hours.	60 hours.
Sections		55 hours.	90 hours.

CLINICAL PATHOLOGY.

Laboratory	60 hours.
Recitations	6 hours.

Text-Books—Osler, *Practice of Medicine*; Musser, *Medical Diagnosis*; Tyson, *Physical Diagnosis*; Salinger and Kalteyer, *Medicine*; Woods, *Chemical and Microscopical Diagnosis*.

SURGERY.

LEWIS A. STIMSON, M.D., *Professor of Surgery.*

Professors of Clinical Surgery,

FREDERIC S. DENNIS, M.D.,	FREDERICK GWYER, M.D.,
GEORGE WOOLSEY, M.D.,	PERCIVAL R. BOLTON, M.D.,
FREDERICK KAMMERER, M.D.,	CHARLES L. GIBSON, M.D.

Instructors,

BENJAMIN TILTON, M.D.,	ARCHIBALD E. ISAACS, M.D.,
JOHN ROGERS, M.D.,	JAMES MORLEY HITZROT, M.D.,
GEO. E. DODGE, M.D.,	J. PRESCOTT GRANT, M.D.,
WILLIAM A. DOWNES, M.D.	

Assistant,

CLARK S. GOULD, M.D.

Surgery is taught in the recitation room, at the bedside, in the dispensaries, at hospital clinics, and by lectures.

In the second year the students are required to attend recitations on the principles of surgery two hours a week throughout the term. For this purpose the class is divided into small sections to insure thor-

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ough work; so far as time permits instruction will also be given at the bedside.

In the third year recitations are continued upon regional surgery; the class is instructed in sections in Bellevue Hospital in history-taking and methods of surgical examination and diagnosis, three hours a week for part of the term; and also two hours a week bedside instruction. Formal clinics are held in Bellevue, New York, and other hospitals; about forty lectures are given by the Professor of Surgery, and a clinic for diagnosis is held once a week throughout the term, at which the students are required personally to examine and report upon the cases.

In the fourth year the students receive clinical instruction in small groups in several hospitals and dispensaries upon general surgery and the special branches—eye, ear, nose and throat, genito-urinary diseases, gynecology, dermatology and orthopædics; may attend the lectures and clinics, and will have a review quiz in preparation for examination.

The members of the sections are trained in the examination of patients, the dressing of wounds and fractures, the administration of ether and assisting at operations.

The opportunities for instruction in the special branches are exceptionally ample. There are several clinical teachers in each subject, each with hospital and dispensary services. The student will be enabled directly to examine and study cases, and will have a certain choice as to the time given to each branch.

In addition to the clinics at Bellevue and the New York hospitals specified above, Professor Kammerer will give clinics once a week at the German Hospital, which the seniors attend in groups of twelve. Clinics of a similar character by other members of the faculty will be announced from time to time as opportunity during the session arises.

Lectures on special topics are given in the college lecture courses in the second term, to which students of all the classes are admitted.

Operative Surgery is taught to small sections of the class in the fourth year. The course consists of recitations, work upon the cadaver, and the application of bandages and plaster dressings. As the material is abundant, each member of the class will perform the principal surgical operations.

In connection with the Animal Hospital the students will have opportunities directly to assist in operations. These operations are not experimental or vivisectional, but solely for the relief of existing disease.

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Special instruction in operative surgery is offered to graduates in medicine. A circular giving particulars may be had on application to the Secretary.

SUMMARY.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		40 hours.	40 hours.
Recitations	60 hours.	60 hours.	30 hours.
Clinics		86 hours.	86 hours.
Sections		40 hours.	25 hours.
Operative Surgery . . .			30 hours.

Text-Book—*American Text-Book*; Rose and Carrs.

Collateral Reading—Parks, *Surgery*; Stimson, *Fractures and Dislocations*; Operative Surgery; Dennis, *System of Surgery*.

OBSTETRICS.

J. CLIFTON EDGAR, M.D., *Professor of Obstetrics and Clinical Midwifery.*

Instructors,

GEORGE D. HAMLEN, M.D.,
ALBERTUS A. MOORE, M.D.,

I. L. HILL, M.D.,
GUSTAVE SEELIGMANN, M.D.

Instruction in obstetrics will be given during the second, third, and fourth years by—

1. Recitations. 2. Illustrative lectures. 3. Obstetric clinics and conferences. 4. Attendance upon cases of confinement. 5. Manikin practice and section work. 6. Obstetric histology, pathology, and bacteriology.

1. Recitations from a standard text-book will be held by an instructor in obstetrics during the second year upon the physiology, and during the third upon the pathology, of obstetrics, the latter including obstetric surgery.

These recitations are so scheduled as to cover the field of the subject laid out for the college year, are supplementary to the work of the Professor of Obstetrics during each of these two years, and prepare the student for an intelligent appreciation of his subsequent illustrative lectures, attendance upon cases of confinement, clinics, and manikin practice.

2. The Illustrative Lectures comprise a systematic course running through the third year, upon the physiology and pathology of obstetrics.

These lectures are theoretical to a limited extent only, being mainly demonstrative and illustrative in character. To this end ample black-board space is used, as well as an abundant collection of pelves, entire, normal and deformed, mesial sections of the same, and in addition a supply of diagrams, charts, carefully selected plaster, composition, and metal models, wet and dry preparations, and instruments.

3. Obstetric Clinics and Conferences.—A weekly obstetric clinic is held by Professor Edgar a portion of the year for both the third- and fourth-year classes at the Manhattan Maternity and Dispensary, 327 East 60th Street. At this clinic abnormal cases of pregnancy, labor, and the puerperium are demonstrated, and the major and minor obstetric operations performed.

In addition, infant feeding and the care of mother and child during the lying-in period and early infancy are taught. During both the third and fourth year, members of the class will be called upon to examine patients and discuss etiology, diagnosis, prognosis, and treatment.

4. Attendance upon Cases of Confinement.—Each candidate for the degree of M.D. is required to present satisfactory evidence to the effect that he has attended a definite number of cases of confinement. To fulfil this requirement students may register as internes in the Manhattan Maternity and Dispensary, 327 East 60th Street, and receive this practical instruction from Professor Edgar and the instructor in obstetrics. Students are lodged in the above hospital for periods of two weeks or more, and attend confinement cases both in the hospital building and in the tenement-house districts of the upper east side of the city.

During the student's attendance upon his practical maternity course he may be excused from the exercises of the College during the fourth college year, otherwise he shall take his practical obstetric course during vacation time. Further information concerning the practical obstetric work may be obtained by applying at the Secretary's office.

5. Manikin Practice and Section Work.—Manikin practice is given to sections of the class during the third year, and consists of work by individual students upon the manikins, under the supervision and criticism of an instructor.

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The mechanical phenomena of labor; modes of delivery; abnormal presentations and positions, with methods of delivery of each; version; application of the forceps, and other manipulations, will be demonstrated by the instructor and performed by the student.

Diagrams, models, casts, wet and dried specimens, will be used in the demonstrations.

The sections will also be instructed at the bedside at the Emergency Hospital and Manhattan Maternity and Dispensary in the management of pregnant and parturient women, the care of the newborn child, abdominal palpation, and pelvic mensuration.

6. Obstetric Histology, Pathology, and Bacteriology.—Laboratory instruction is given during the third year by the Assistant Professor of Histology upon the histology of the vulva, vagina, uterus, ligaments, Fallopian tubes, and ovaries in the pregnant and non-pregnant conditions, and upon the histology and pathology of the decidua, chorion, placenta, and umbilical cord.

SUMMARY.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		30 hours.	
Recitations	30 hours.	30 hours.	-
Clinics		15 hours.	15 hours.
Sections		15 hours.	

Text-Book—Edgar, *Practice of Obstetrics*.

DEPARTMENT OF PATHOLOGY.

INCLUDING HISTOLOGY, EMBRYOLOGY, BACTERIOLOGY,
AND GROSS, GENERAL, AND EXPERIMENTAL PA-
THOLOGY.

JAMES EWING, M.D., *Professor of Pathology*.

BERTRAM H. BUXTON, M.D., *Professor of Experimental Pathology*.

JEREMIAH S. FERGUSON, M.D., *Assistant Professor of Histology*.

OTTO H. SCHULTZE, M.D., *Assistant Professor of Pathological Anatomy*.

WILLIAM J. ELSER, M.D., *Assistant Professor of Bacteriology*.

SILAS P. BEEBE, Ph.D., *Research Assistant in Experimental Pathology*.

MAX G. SCHLAPP, M.D., *Instructor in the Histology and Pathology of the Nervous System*.

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JAMES C. JOHNSTON, M.D., *Instructor in Pathology.*

ISRAEL STRAUSS, M.D., *Instructor in Embryology.*

EWING TAYLOR, M.D., *Instructor in Histology.*

PHILIP A. SHAFFER, Ph.D., *Instructor in Pathological Chemistry.*

JOHN C. TORREY, Ph.D., *Assistant in Experimental Pathology, and Lecturer in Hygiene.*

RICHARD WEIL, M.D., *Assistant in Experimental Pathology.*

HENRY T. LEE, M.D., *Assistant in Pathology.*

DOUGLAS SYMMERS, M.D., *Assistant in Pathology.*

THOMAS A. NEAL, M.D., *Assistant in Gross Pathology.*

FRANK M. HUNTOON, M.D., *Assistant in Bacteriology.*

JAMES B. GERE, M.D., *Assistant in Histology and Pathology of the Nervous System.*

CHARLES R. STOCKARD, Ph.D., *Instructor in Comparative Morphology.*

LEOPOLD JACHES, M.D., *Instructor in Microphotography.*

COMPARATIVE MORPHOLOGY.

In order to acquaint the student with the general structure of systems and organs throughout the animal kingdom, and to furnish a basis for the study of human anatomy, embryology, and physiology, a course in Comparative Morphology is provided in the first half of the first year.

The structure of the integument, muscular system, skeleton, alimentary canal, respiratory organs and organs of special sense, are demonstrated in protozoa, vermes, crustacea, amphioxus, fishes, amphibians, reptiles, birds, and lower mammals.

Laboratory, thirty hours. Lectures, fifteen hours. Required in the first year. Dr. Stockard.

HISTOLOGY.

The work in this subject, with the exception of the histology of the central nervous system, is completed in the first year. The course in neurohistology is given in the early part of the second year, after the student has become familiar with the macroscopical anatomy of the brain and spinal cord.

The work consists of *laboratory exercises* in three two-hour sessions weekly throughout the first year, and one two-hour session weekly

during the first half of the second year, occupying in all about 175 hours in the first, and 30 hours in the second year for each student. The various courses cover the construction and use of the microscope, the preparation of microscopical sections of the tissues, the examination of freshly obtained and living tissue, and the normal histology and microscopical anatomy of all of the tissues and organs of the human body. Whenever desirable for the elucidation of special subjects use is made of the lower vertebrate tissues.

Two *recitations* of one hour each are held weekly during the first year, and one recitation weekly during the first half of the second year, in all 75 hours for each student. Subjects for recitation are assigned from the text-book on histology, and are designed to completely familiarize the student with the structure of the tissues as studied in the laboratory.

An examination is held at the end of each year. The standing of the student in this, as in other subjects, is determined equally from the work in the laboratory exercises and in the recitations.

SCHEME OF INSTRUCTION IN HISTOLOGY.

I. Histological Technique, including the structure and use of the microscope and the preparation and examination of simpler tissues. Laboratory and recitations, 8 hours weekly for the first two weeks, and at occasional intervals throughout the first year 16 to 30 hours. Drs. Ferguson and Taylor.

II. Histology.—All of the primary tissues of the body, including the blood and lymph-vascular systems are studied, and the student is taught the necessary technique for the preparation of the tissues for examination. Laboratory and recitations, 8 hours weekly for 11 weeks. 88 hours.

III. Organology and Microscopic Anatomy.—This course considers the minute structure of all the organs of the body and their relation to the salient features of physiology and pathology. Laboratory and recitations, 8 hours weekly for 18 weeks. 144 hours. Drs. Ferguson, Taylor, and Stockard.

IV. Histology and Microscopical Anatomy of the Central Nervous System.—This course is given in the early part of the second year. In addition to the histology of the central nervous system the student traces the course of the central conduction paths of the

spinal cord and brain, locates the more important nuclei of the motor and sensory paths and the nuclei of origin of the cranial nerves, and determines the relation of these to the conduction paths. Special attention is paid to results of injury and to the application of histological structure to the explanation of pathological phenomena and clinical symptoms. Laboratory and recitations. Drs. Schlapp, Gere, and Taylor.

V. Advanced Work and Research.—Each student receives individual attention in the laboratory. The more apt and proficient are thus enabled to advance rapidly through the work of the preliminary courses. When sufficiently advanced such students will, upon application, be assigned to advanced work upon the methods of research. A reading knowledge of French and German is essential.

EMBRYOLOGY.

The course in embryology consists in laboratory exercises and lectures, and is designed to present the manner in which adult human tissues and organs are developed.

The work embraces the study of karyokinesis in its various phases; fertilization of the ovum and its bearing on heredity; cleavage as represented in the eggs of the starfish and salamander; the various types of gastrulation and the formation of germ layers in the starfish, salamander, and chick; and the development of organs and systems in the chick, pig, and human embryo. Full sets of sections, transverse and sagittal, of these embryos at various stages are provided, and the Ziegler models are employed for illustration. The lectures are devoted to the discussion of the theory of development, and to a comparison of its phases in different classes of vertebrates. Special attention is devoted to those stages of development at which may result monsters, twins, and tumors.

The student is also directed in collateral reading on these topics.

Laboratory exercises, 45 hours. Lectures, 15 hours. Required in the latter half of the first year. Drs. Strauss and Stockard.

BACTERIOLOGY.

In the course in bacteriology the student is first made familiar with the methods of disinfection, and is required to prepare the ordinary

culture media. The work then proceeds to the methods of staining and examining bacteria; their artificial cultivation and the study of biological characters; the methods employed in the separation of species; the general relation of pathogenic bacteria to disease; and concludes with the biological analysis of air, water, soil, and milk. Cultures are made from the viscera of cases of the various infectious diseases, and the student is required to cultivate and identify the important pathogenic micro-organisms. The work is supplemented when necessary by the use of pure cultures, by the exhibition of anaërobic cultures, and to a limited extent by inoculation in animals.

Laboratory work and lectures. Ninety hours. Required in the second year. Drs. Elser and Huntoon.

PATHOLOGY.

The course of instruction in pathology in the second year comprises a preliminary course of lectures on the theory and classification of inflammations, which is designed to acquaint the student with the main facts in this field, to prepare him for preliminary studies in medicine and surgery, and to establish a uniform system of nomenclature to be used in this and other departments. During one half the second year, also, attendance is required at one weekly demonstration in gross pathology, at which the more common visceral lesions are exhibited. This course is designed to accompany the preliminary recitations in medicine and surgery of the second year.

The main branches of the subject are grouped in the third year in order to secure the simultaneous study of the gross and microscopical changes in diseased tissues. In the fourth year the students perform autopsies, and attend lectures in special pathology.

SCHEME OF INSTRUCTION IN PATHOLOGY.

I. Pathology of Inflammation.—Ten lectures. Required at the opening of the second year. Dr. Ewing.

II. Gross Pathology.—Demonstrations. Thirty hours. Required in the latter half of the second year. Dr. Neal.

III. General Pathology.—Lectures, gross, and microscopical demonstrations, 180 hours. Required in three two-hour sessions weekly throughout the third year.

(a) Pathology of Degenerations, Inflammation, Infectious Granulomata. Fifty hours. October and November.

(b) Tumors. Forty hours. December and January.

(c) Special Pathology. Seventy hours. February, March, April. Drs. Ewing, Johnston, Lee, and Symmers.

IV. Neuropathology.—Lectures and microscopical demonstrations. Thirty-six hours. April and May. Drs. Schlapp, Johnston, Gere, and Lee.

V. Gross Pathology.—On the days alternating with the microscopical studies demonstrations of gross pathological specimens are held on the material collected from autopsies. With the viscera of each case is presented an epitome of the clinical history, and, when necessary, frozen sections of the organs, and the clinical symptoms are explained from the gross and microscopical changes in the tissues. The student here sees the organs of many of the fatal cases which he has studied in the wards of hospitals. Gross pathological diagnosis is taught as a separate branch of this subject, not bearing directly on the clinical aspect of the case.

Lectures and demonstrations. Sixty-five hours. The class is divided into three sections, each attending one two-hour session weekly throughout the third year. Drs. Schultze and Neal.

VI. Medico-Legal Pathology.—The medico-legal relations of pathology are extensively illustrated in the material collected at the Morgue and various hospitals, and special attention is devoted to this subject in the third and especially in the fourth years. The lectures in Special Pathology in the fourth year cover certain topics in medico-legal pathology. Drs. Schultze and Neal.

VII. Autopsy Technics in General and Medico-Legal Cases.—The class is divided into six sections, each attending three sessions of two to three hours weekly for six weeks. Fifty hours. Required in the fourth year. Drs. Schultze and Neal.

VIII. Special Pathology.—Lectures on special topics in Pathology are given during March and April. The subjects have included The Mechanism of Immunity, The Etiology of Tumors, Cerebral Hemorrhage, The Comparative Morphology of the Cerebral Cortex. Drs. Ewing, Schultze, and Schlapp.

IX. Recitations.—One recitation weekly is required of each student throughout the third year. These exercises cover the work of the

preceding week, and are of the nature of conferences for the fuller discussion of the topics considered. Dr. Johnston.

X. Examinations.—Written and practical examinations are held at the end of each year. The standing of the student is determined from the theoretical and practical work, the recitations, and the examinations.

EXPERIMENTAL PATHOLOGY.

In 1903 Cornell University established a Department of Experimental Pathology. In this institution are associated a number of men whose time is devoted to the study of problems in medical science.

Abundant space and modern facilities are provided in the Loomis Laboratory in which are laboratories equipped for experimental pathology, bacteriology, serum pathology and therapeutics, pathological chemistry, and micro-photography. Instruction has been given to a number of assistants and volunteer workers who desired to enter the field of research in these subjects, and is available to properly qualified applicants. From time to time the methods pursued in this department, and the results obtained are presented to the undergraduate students in the medical course.

The members of this staff are Professor Buxton and Drs. Beebe, Torrey, Shaffer, Teague, Weil, Jaches, Riggs, and assistants.

Since 1904 the work of the Huntington Fund for Cancer Research has been located in the Loomis Laboratory, under the immediate direction of Professor Buxton and Dr. S. P. Beebe, assisted by Dr. Shaffer, Dr. Stockard, and others.

Advanced Courses and research.—The abundant facilities of the laboratory on the fourth floor of the new building can be offered to properly qualified students and practitioners of medicine who wish to pursue advanced courses of study on lines of research, under the direction of special instructors.

SUMMARY.

	<i>First Year.</i>	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
<i>Comparative</i>				
<i>Morphology</i>	45 hours.			
<i>Histology:</i>				
Recitations . . .	60 hours.	25 hours.		
Laboratory . . .	120 hours.	60 hours.		

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	<i>First Year.</i>	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
<i>Embryology:</i>				
Laboratory . . .	45 hours.			
Lectures	15 hours.			
<i>Pathology:</i>				
Lectures		10 hours.	10 hours.	10 hours.
Laboratory . . .			180 hours.	
Recitations . . .			30 hours.	
<i>Gross Pathology:</i>				
Laboratory . . .		15 hours.	60 hours.	30 hours.
<i>Bacteriology:</i>				
Laboratory . . .		90 hours.		

Text-Books: Histology—Ferguson, *Text-Book of Histology*.

Pathology—Delafield and Prudden, *Pathological Anatomy and Histology*.

Bacteriology—Muir and Ritchie, *Manual of Bacteriology*; Park, *Bacteriology*.

Collateral Reading—Orth, *Pathological Diagnosis*; Ziegler, *General Pathology*; Sternberg, *Manual of Bacteriology*; Ewing, *Pathology of the Blood*; Minot, *Embryology*.

SPECIAL DEPARTMENTS OF MEDICINE AND SURGERY.

NERVOUS DISEASES.

CHARLES L. DANA, M.D., *Professor of Clinical Medicine, Department of Diseases of the Nervous System.*

Instructors,

JOSEPH FRAENKEL, M.D., J. RAMSAY HUNT, M.D.,
LESLIE J. MEACHAM, M.D.

Assistants,

ROBERT M. DALEY, M.D., ALEXANDER S. LEVERTY, M.D.

The regular work consists of a preliminary series of lectures by Professor Dana, in which the general outline of the work for the year is given, with demonstrations of the general anatomy, general symptomatology, and methods of examination of the nervous system. During the rest of the term clinical lectures on nervous diseases are held weekly in the amphitheatre of Bellevue Hospital or at the college. Section work is given weekly to classes in the wards of Bellevue Hospital, and four times a week in the dispensary of the college. In this dispensary, section-work instruction is given in history-taking in the examination of patients, and in electro-therapeutics. In addition a special course of lectures on practical phases of neurology is given by Dr. Joseph Fraenkel.

It is considered of the greatest importance that the student of nervous diseases be thoroughly grounded in the anatomy and physiology of the nervous system, therefore courses in gross and microscopical anatomy of the nervous system are provided in the histological laboratory. Special students can also take courses on the pathology of the nervous system.

Special instruction in electro-therapeutics is given by one of the instructors, and special hours are given to psycho-therapy at the Dispensary. Thus the course of instruction aims to provide the student be-

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fore he graduates with instruction in the microscopical anatomy of the nervous system, in its physiology and pathology, and also with practical clinical instruction in the amphitheatre, at the bedside, and in the dispensary.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures	5 hours.	
Clinics	20 hours.	20 hours.
Sections	15 hours.	5 hours.

Text-Book—Dana, *Diseases of the Nervous System and Psychiatry.*

Collateral Reading—Gower, *Diseases of the Brain and Spinal Cord*; works on nervous diseases by Dercum, Mills, Sachs, Starr; Obersteiner, *Anatomy of the Nervous System.*

PSYCHO-PATHOLOGY.

ADOLF MEYER, M.D., LL.D., *Professor of Clinical Medicine, Department of Psycho-pathology.*

Clinical Instructors,

AUGUST HOCH, M.D.,

GEORGE H. KIRBY, M.D.

The course is to cover the principal data and methods of modern psycho-pathology, the diagnosis and legal commitment of the insane, and the medico-legal problems of insanity.

It consists of five general lectures, eight two-hour clinics at the Manhattan State Hospital on Ward's Island, each followed in a few days by a one-hour review of the topic of the clinical demonstration, and two lectures on the practical issues, commitments and medico-legal principles.

Three to four hours of optional section work is given at Bellevue Hospital or in the college dispensary.

SUMMARY.

General lectures	7 hours.
Clinics	16 hours.
Reviews	8 hours.
Section work (optional)	3-4 hours.

Reference-Book—Kraepelin, *Clinical Psychiatry.*

DISEASES OF CHILDREN.

JOSEPH E. WINTERS, M.D., *Professor of Clinical Medicine, Department of Diseases of Children.*

Clinical Instructors,

WILLIAM D. TYRRELL, M.D.,

WILLIAM SHANNON, M.D.

Assistants,

SAMUEL M. EVANS, M.D.,

EDWARD HAND, M.D.

This department will embrace clinical instruction and section teaching in all the important diseases of infancy and childhood.

There will be one clinical lecture each week in the college building, and clinical lectures in the Willard Parker Hospital on scarlet fever and diphtheria.

In connection with the dispensary of the Children's Department in the college building there is an amphitheatre for section teaching, and isolation rooms for contagious diseases, so that students have ample opportunity for the personal study of disease.

Two hours each week will be devoted to section teaching in the dispensary to the students of the fourth year.

Students will be required to examine sick children and discuss the diagnosis and treatment of patients assigned to them.

Special attention is given to the hygiene and feeding of infants; the digestive disorders of infants; the dietetics of childhood and the food disorders of infancy and childhood; the anatomical and physiological peculiarities of infancy and childhood; and the influence these peculiarities have on the manifestations of disease in children.

One of the distinguishing features of this department will be the instruction of each student in the art of diagnosis by the professor in charge.

There will be practical bedside illustrations of the management, care, and therapeutics of all the acute diseases of infancy and childhood.

In the clinical laboratory microscopical examinations will be made of secretions and excretions, of lesions of the mouth and throat, and of sections of anatomical lesions of the important diseases of childhood.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Clinics	30 hours.	30 hours.
Sections		10 hours.

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Text-Book—Henry Ashby, *The Diseases of Children*, London, fifth ed., 1905; Rotch, *Pediatrics*.

Collateral Reading—Starr, *American Text-Book on the Diseases of Children*; Welch and Schomberg, *Acute Contagious Diseases*.

HYGIENE.

Instruction in many of the branches of hygiene and preventive medicine is a prominent feature in some of the courses pursued in the several departments of Chemistry, Bacteriology, Pathology, and Medicine.

The topics thus covered include the chemical and bacterial analysis of air, water, milk; the preservation and adulteration of foods; and the general diagnosis, control, and prevention of infectious diseases.

The more distinctive branches of hygiene and preventive medicine are presented in a course of lectures to third- and fourth-year students. Some of the topics thus considered are:

(1) The hygiene of dwellings, ventilation, sanitary plumbing, lighting, water supply, disposal of sewage, school hygiene, and municipal sanitation.

(2) The chemical problems relating to the collection, storage, and distribution of water supplies. Dr. Riggs.

(3) The relation of diseases of lower animals to those of man. Meat inspection. Milk inspection. Prof. Moore.

(4) Epidemiology, prophylaxis, and hygiene of transmissible diseases. Prof. Ewing.

Text-Books—Eghert, *Hygiene and Sanitation*; Bergey, *Text-book of Hygiene*; Notter, *Theory and Practice of Hygiene*.

GYNÆCOLOGY.

WILLIAM M. POLK, M.D., *Professor of Clinical Surgery, Department of Gynæcology.*

Instructors,

CHARLES C. BARROWS, M.D.,

GEORGE D. HAMLEN, M.D.,

GEORGE G. WARD, JR., M.D.,

LEROY BROWN, M.D.

Instruction in gynæcology is given by recitations, lectures, ward and class-room demonstrations, clinics, and laboratory demonstrations.

Five Lectures, upon topics of special interest and importance to the subject as a whole, will be given during the fourth year.

Recitations are planned to cover the entire subject, and are held one hour a week during the fourth year of the course. In order that the instruction throughout the department may be as nearly in unison as pos-

sible, a synopsis of the subject-matter of each lesson is prepared by the instructor and amended and revised by the head of the department. This is presented to the student for comparison with his text-book, to which it is an addendum. This method insures the coöperation of the head of the department in the groundwork of his subject and enables him to keep in touch with each student until his graduation.

Class-room and Ward Demonstrations are given to sections of the fourth-year class twice a week throughout the year. This instruction includes the examination of patients by the students, who are thereby drilled in the methods of physical diagnosis as applied to the pelvis. When necessary the patients are anæsthetized.

The routine treatment appropriate to the various conditions found is demonstrated, the students assisting when possible. In this way, not only is familiarity acquired with normal conditions within the pelvis and the various departures from this state induced by disease, but opportunity is afforded to see and put in actual practice measures of relief and to watch the subsequent course and treatment of these cases.

Operations are performed three days every week at which the several sections are enabled to study the detail of every operation peculiar to this department.

A General Clinic is held once a week at which students selected in rotation are required to examine the patient, make a diagnosis, and suggest treatment. They are questioned before the class upon all these topics, as they relate to the case in hand, so as to determine the correctness of their conclusions. Should operation be called for, it is then performed.

Laboratory Demonstrations of secretions, discharges, and specimens obtained from patients who come under observation during this course are made to sections of the third-year class as a part of the course in clinical pathology.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		6 hours.
Recitations		30 hours.
Clinics	30 hours.	30 hours.
Sections		20 hours.

Text-Book—Penrose, *Gynæcology*; Findley, *Diagnosis*.

Collateral Reading—Dudley, *Gynæcology*; Garrigues, *Diseases of Women*.

DISEASES OF THE GENITO-URINARY ORGANS.

SAMUEL ALEXANDER, M.D., *Professor of Clinical Surgery, Department of Diseases of the Genito-Urinary System.*

Clinical Instructor,
FRANCIS C. EDGERTON, M.D.

The course is required of students during the third and fourth years, and is designed to give instruction in diagnosis and treatment of the surgical diseases of the male genital and urinary organs and syphilis.

Lectures.—One lecture a week from the opening of the term to the first of January will be given by Professor Alexander at the college, introductory to the clinical courses, and upon syphilis.

Clinic.—A clinic will be given in the amphitheatre of Bellevue Hospital once each week after the first of January by Professor Alexander. At this clinic the principal operations upon the male urinary and genital organs will be performed before the class, and special attention will be given to the subject of diagnosis and post-operative management of cases. Attendance upon these clinics is required by students during the third and fourth years.

Section Teaching at the College Dispensary.—The third-year class will be divided into sections of small size, and instruction will be given by the Chief of Clinic and the instructors in the college dispensary. Special attention will be given in this course to the diagnosis and treatment of the venereal diseases and the use of special instruments.

The fourth-year class will be divided into sections of small size, and instruction will be given in the wards of Bellevue Hospital by Professor Alexander. This course will be devoted principally to the diseases of the urinary organs and to instruction in the use of special instruments and apparatus and the post-operative treatment of cases.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Clinics	18 hours.	18 hours.
Sections	15 hours.	10 hours.
Lectures		12 hours.

Text-Books—White and Martin; Keyes.

Collateral Reading—Hyde and Montgomery; Keyes and Chetwood.

DERMATOLOGY.

GEORGE T. ELLIOT, M.D., *Professor of Clinical Surgery, Department of Dermatology.*

JAMES C. JOHNSTON, M.D., *Assistant Professor of Clinical Surgery, Department of Dermatology.*

Clinical Instructor,

HANS J. SCHWARTZ, M.D.

Instruction in Dermatology will be given by the Clinical Professor and his assistants. No teaching will be given didactically, but the cutaneous diseases will be demonstrated on the living subject. Abundance of material for such instruction is obtainable, and the student can thoroughly familiarize himself with the more common as well as with the rarer diseases of the skin by actual personal contact and observation. Attention is particularly paid to the diagnosis and the etiology of skin diseases, but their therapeutics also receive due consideration.

SUMMARY.

Fourth Year.

Sections 25 hours.

Text-Books—H. Stelwagon, *Diseases of the Skin*; J. Nevins Hyde, *Dermatology*.

LARYNGOLOGY AND RHINOLOGY.

CHARLES H. KNIGHT, M.D., *Professor of Clinical Surgery, Department of Laryngology and Rhinology.*

Clinical Instructor,

JAMES E. NEWCOMB, M.D.

Assistants,

FRANKLIN T. BURKE, M.D.,

WALTER C. MONTGOMERY, M. D.,

CHARLES MACK, M.D.,

PERRY SCHOONMAKER, M.D.

Instruction in Laryngology and Rhinology is given by clinical lectures at the college by the Professor of the department. The subjects then considered are demonstrated to the fourth-year students by the instructor and by the assistants. The class is divided into sections, and

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each member is expected to examine patients and perform manipulations. The clinics are fully illustrated by plates and models, and, as far as possible, by clinical material.

SUMMARY.

	<i>Fourth Year.</i>
Lectures	8 hours.
Sections	15 hours.

Text-Book—Knight, *Diseases of the Nose and Throat.*

Collateral Reading—Grünwald, *Atlas of Diseases of the Larynx*;
Grünwald, *Atlas of Diseases of the Mouth, Pharynx, and Nose.*

OPHTHALMOLOGY.

CHARLES STEDMAN BULL, M.D., *Professor of Clinical Surgery, Department of Ophthalmology.*

Clinical Instructors,

ROBERT G. REESE, M.D.,

J. HERBERT CLAIBORNE, M.D.

Instruction in Ophthalmology consists in lectures at the college building once a week, during the months of October, November, and December, and in sectional teaching two hours a week at the college dispensary throughout the year. The weekly lectures at the college are didactic, and consider the subjects of the external or superficial diseases of the eye, the anomalies of the ocular muscles, and the deep lesions of the eye which are not susceptible of clinical demonstration. The sectional teaching at the college dispensary is devoted partly to clinical ophthalmology and the use of the ophthalmoscope, and partly to instruction in the errors of refraction and the rudiments of the fitting of lenses. Thus the entire field of ophthalmology is covered.

SUMMARY.

	<i>Fourth Year.</i>
Clinics	10 hours.
Sections	20 hours.

Text-Book—Noyes.

Collateral Reading—De Schweinitz, Swanzy, Jackson, Nettleship, Berry, May, Fuchs.

OTOLOGY.

FREDERICK WHITING, M.D., *Professor of Clinical Surgery, Department of Otology.*

Clinical Instructor,
GEORGE B. MCAULIFFE, M.D.

Assistants,
EARLE CONNER, M.D., NATHAN S. ROBERTS, M.D.,
GEORGE W. KUNZ, M.D., THOMAS A. MULCAHY, M.D.

During the first third of the fourth year a systematic course of weekly lectures is given. These lectures are practical in character, including a consideration of the anatomy and physiology of the ear and the various methods of examination. Patients are shown to the class in order to familiarize the students with the symptoms and character of the more important diseases.

For clinical instruction in the dispensary, the fourth-year class is divided into sections. Each student receives practical instruction from Professor Whiting and his assistants in the examination of patients, the use of the otoscope, and the various methods of testing the hearing. The student is permitted to examine patients and, after a probationary period, to prescribe for them and thus gradually assume the duties of a clinical assistant. The students also have an opportunity of witnessing the more important operations in aural surgery, including intracranial complications at the New York Eye and Ear Infirmary.

SUMMARY.

	<i>Fourth Year.</i>
Clinics	9 hours.
Sections	15 hours.

Text-Book—Bacon, *On the Ear.*

Collateral Reading—Politzer, *Diseases of the Ear*; Macewen, *Pyogenic Infective Diseases of the Brain and Spinal Cord*; Whiting, *The Modern Mastoid Operation.*

ORTHOPÆDIC SURGERY.

NEWTON M. SHAFFER, M.D., *Professor of Clinical Surgery, Department of Orthopædic Surgery.*

Clinical Instructors,

P. HENRY FITZHUGH, M.D., JOHN JOSEPH NUTT, M.D.

Assistants,

PERCY WILLARD ROBERTS, M.D., DEAS MURPHY, M.D.,
WATERS T. BURROWS, M.D.

The course of study in the Orthopædic Department includes a stated clinical lecture once a week, with detailed demonstrations in sectional work twice a week during two months of the year.

During the regular clinical course especial attention is given to the early recognition of the deforming diseases of childhood, also to the symptomatology, pathology, and differential diagnosis of chronic and progressive deformities, including the mechanical and operative treatment.

In detail, the course consists of practical illustrations of methods of treatment, the apparatus used being thoroughly explained both in construction and in principle, attention being called to even minute points of construction and use. The operative side is fully dwelt upon, the indications for operative interference as an adjunct to the mechanical work being demonstrated. Ample clinical material is provided, and models of conventional forms of apparatus are placed at the disposal of students.

In the section and laboratory work the student is required to assist in the management of selected cases, to familiarize himself with the various methods of treatment, to construct the simpler forms of apparatus, to secure a practical knowledge of the details of construction of the more complicated instruments, and to familiarize himself with the pathological conditions existing in the deformities of childhood.

SUMMARY.

	<i>Fourth Year.</i>
Clinics	10 hours.
Sections	10 hours.

Text-Book—Bradford and Lovett.

RADIOGRAPHY AND RADIO-THERAPY.

ALBERT C. GEYSER, M.D., *Instructor.*

This department is equipped with the most modern implements, coils, static machines, and high-frequency apparatus.

A large clinic furnishes abundant material for the demonstration of diagnosis, therapeutics, and the taking of radiographs. Students of the fourth-year class are taught in sections and given an opportunity to become thoroughly familiar with the various electrical agents.

SUMMARY.

	<i>Fourth Year.</i>
Sections	10 hours.

MEDICAL JURISPRUDENCE.

This subject is covered in the regular course of study by several departments and by special lectures. The responsibilities of the physician towards the insane and their relatives and the general public, and the criminal aspects of the mentally defective are discussed by Professor Meyer. In the course on Obstetrics Professor Edgar takes up the moral and legal side of rape, feigned and unconscious pregnancy, what constitutes a "live birth," feigned or unconscious delivery, injury to the foetus during precipitate labor, post-mortem delivery and the diagnosis of recent delivery. Professor Witthaus in the teaching of Toxicology discusses both its medical and medico-legal relations, and gives considerable attention to the "expert" witness and his rights and obligations, and advises as to how he should conduct himself. Dr. Schultze, in addition to his regular course in Gross Pathology, demonstrates medico-legal autopsies and cases of homicide, suicide, accident and abortion. A lawyer considers in a separate course the matter of the right to practice medicine, its acquirement and the statutory regulations; also State and City Boards of Health and their powers together with the regulations as to contagious diseases. The contractual relation between the physician and his patient as well as the recovery of compensation, and the liability for "damages," malpractice and privileged communications are fully discussed.

SUMMARY OF THE PLAN OF INSTRUCTION.

The right is reserved to make amendments to this curriculum as experience may prove necessary.

The hours stated indicate the number of hours assigned to each student.

The total of hours devoted by each department to instruction is, of course, much in excess of these.

FIRST YEAR.

Anatomy.

Laboratory course, including recitations, demonstrations, and dissections.....	510 hours.
Lectures	30 hours.
Laboratory, 2 hours for 15 weeks.....	30 hours.

Chemistry.

Recitations, 2 hours weekly.....	60 hours.
Laboratory, 4 hours weekly.....	120 hours.

Physics.

Lectures, 3 hours weekly.....	90 hours.
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Histology.

Laboratory, 4 hours weekly.....	120 hours.
Recitations, 2 hours weekly.....	60 hours.

Embryology.

Lectures, 1 hour weekly, 15 weeks.....	15 hours.
Laboratory, 2 hours weekly, 15 weeks.....	45 hours.

Comparative Morphology.

Lectures and Laboratory.....	45 hours.
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Materia Medica.

Lectures and recitations.....	30 hours.
Laboratory	30 hours.

Electives.

Laboratory Pharmacology.
Physiological Chemistry.

These elective courses are open to certain advanced students, as described on page 30 of the Announcement.

In the course of the session one written review is held in the subjects recited upon. The papers are examined by the professors of the respective branches.

SECOND YEAR.

Anatomy.

Lectures, 2½ hours weekly.....	75 hours.
Recitations, 2 hours weekly.....	60 hours.

Physiology.

Demonstrations, 4 hours weekly.....	120 hours.
Recitations, 4 hours weekly.....	120 hours.

Organic and Physiological Chemistry.

Laboratory, 2 hours weekly, 18 weeks.....	36 hours.
Laboratory, 4 hours weekly, 12 weeks.....	48 hours.
Lectures, 2 hours weekly.....	60 hours.
Recitations, 1½ hours weekly.....	45 hours.

Pharmacology.

Laboratory, 6 hours weekly, 15 weeks.....	90 hours.
Lectures	30 hours.

Bacteriology.

Laboratory, 6 hours weekly, 15 weeks.....	90 hours.
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Histology.

Laboratory, 2 hours weekly.....	60 hours.
Recitations, 1 hour weekly, 25 weeks..	25 hours.

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Pathology.

Lectures	10 hours.
Gross Pathology, 1 hour weekly for 15 weeks.....	15 hours.

Medicine.

Recitations, 1½ hours weekly.....	45 hours.
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Surgery.

Recitations, 2 hours weekly.....	60 hours.
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Obstetrics.

Recitations, 1 hour weekly.....	30 hours.
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Electives.

Manikin Course in Obstetrics.
Obstetrical Clinic.

The conditions under which certain students may avail themselves of these electives are stated on page 31 of the Announcement.

THIRD YEAR.

Medicine.

Lectures, 2 hours weekly, 10 weeks.....	20 hours.
Clinics, 1 hour weekly.....	30 hours.
Clinics, 1 hour weekly, 16 weeks.....	16 hours.
Recitations, 2 hours weekly.....	60 hours.
Section Work, 3 hours weekly, 10 weeks.....	30 hours.
Section Work, 1 hour weekly, 5 weeks.....	5 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.
Section Work, 1 hour weekly, 5 weeks.....	5 hours.

Surgery.

Lectures, 2 hours weekly, 20 weeks.....	40 hours.
Clinics, 1 hour weekly, 18 weeks.....	18 hours.
Clinics, 1 hour weekly.....	30 hours.
Clinics, 1 hour weekly, 8 weeks.....	8 hours.
Clinics, 1 hour weekly.....	30 hours.
Recitations, 2 hours weekly.....	60 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.
Section Work, 2 hours weekly, 5 weeks.....	10 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.

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Materia Medica.

Recitations, 2 hours weekly..... 30 hours.

Pathology.

Lectures 10 hours.

Laboratory, 6 hours weekly.....180 hours.

Recitations, 1 hour weekly..... 30 hours.

Gross Pathology.

Laboratory, 2 hours weekly..... 60 hours.

Clinical Pathology.

Laboratory, 2 hours weekly..... 60 hours.

Recitations, 1 hour weekly, 6 weeks..... 6 hours.

Obstetrics.

Lectures, 1 hour weekly, 30 weeks..... 30 hours.

Clinics, 1 hour weekly, 15 weeks..... 15 hours.

Recitations, 1 hour weekly..... 30 hours.

Section Work (manikin), 3 hours weekly, 5 weeks..... 15 hours.

Gynæcology.

Clinics, 1 hour weekly..... 30 hours.

Toxicology.

Lectures, 1 hour weekly, 20 weeks..... 20 hours.

Diseases of Children.

Clinics, 1 hour weekly..... 30 hours.

Genito-Urinary Surgery.

Clinics, 1 hour weekly, 18 weeks..... 18 hours.

Section Work, 3 hours weekly, 5 weeks..... 15 hours.

Neurology.

Lectures 5 hours.

Clinics, 1 hour weekly, 20 weeks..... 20 hours.

Section Work, 3 hours weekly, 5 weeks..... 15 hours.

FOURTH YEAR.

Medicine.

Lectures, 1 hour weekly, 10 weeks.....	10 hours.
Clinics, 1 hour weekly.....	30 hours.
Clinics, 1 hour weekly.....	30 hours.
Recitations, 1 hour weekly.....	30 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.
Section Work, 1 hour weekly, 5 weeks.....	5 hours.
Section Work, 4 hours weekly, 5 weeks.....	20 hours.
Section Work, 4 hours weekly, 5 weeks.....	20 hours.
Section Work, 2 hours weekly, 5 weeks.....	10 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.
Section Work, 1 hour weekly, 5 weeks.....	5 hours.

Surgery.

Lectures, 2 hours, 20 weeks.....	40 hours.
Clinics, 1 hour weekly, 18 weeks.....	18 hours.
Clinics, 1 hour weekly, 8 weeks.....	8 hours.
Clinics, 2 hours weekly.....	60 hours.
Section Work, 1 hour weekly, 5 weeks.....	5 hours.
Section Work, 2 hours weekly, 5 weeks.....	10 hours.
Section Work, 2 hours weekly, 5 weeks.....	10 hours.
Operative Surgery, 6 hours weekly, 5 weeks.....	30 hours.
Recitations, 1 hour weekly.....	30 hours.

Obstetrics.

Clinics, 1 hour weekly, 15 weeks.....	15 hours.
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Gynæcology.

Lectures, 1 hour weekly, 6 weeks.....	6 hours.
Clinics, 1 hour weekly.....	30 hours.
Section Work, 4 hours weekly, 5 weeks.....	20 hours.
Recitations, 1 hour weekly.....	30 hours.

Pathology.

Lectures	10 hours.
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Gross Pathology.

Autopsies, 6 hours weekly, 5 weeks.....	30 hours.
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Diseases of Children.

Clinics, 1 hour weekly.....	30 hours.
Section Work, 2 hours weekly, 5 weeks.....	10 hours.

Genito-Urinary Surgery.

Lectures	12 hours.
Clinics, 1 hour weekly, 18 weeks.....	18 hours.
Section Work, 2 hours weekly, 5 weeks.....	10 hours.

Neurology.

Clinics, 1 hour weekly, 20 weeks.....	20 hours.
Section Work, 1 hour weekly, 5 weeks	5 hours.

Psycho-pathology.

General lectures.....	7 hours.
Clinics	16 hours.
Reviews	8 hours.
Section Work (optional).	3-4 hours.

Dermatology.

Section Work, 5 hours weekly, 5 weeks.....	25 hours.
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Laryngology and Rhinology.

Lectures, 1 hour weekly, 8 weeks.....	8 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.

Ophthalmology.

Lectures, 1 hour weekly, 10 weeks.....	10 hours.
Section Work, 4 hours weekly, 5 weeks.....	20 hours.

Otology.

Clinics, 1 hour weekly, 9 weeks.....	9 hours.
Section Work, 3 hours weekly, 5 weeks.....	15 hours.

Orthopædic Surgery.

Clinics, 1 hour weekly, 10 weeks.....	10 hours.
Section Work, 2 hours weekly, 5 weeks.....	10 hours.

Radiography.

Section Work, 2 hours weekly, 5 weeks.....	10 hours.
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EXAMINATIONS.

REQUIREMENTS FOR ADVANCEMENT IN COURSE.

Students are advanced in course from one year to the next upon passing examinations in the work of that year, but examinations in major or minor subjects may, at the discretion of the Head of the Department, include all the work previously covered in the year or years preceding the examinations in question. There is, however, no unnecessary repetition of subjects taught from year to year. Students who have not succeeded in passing all their examinations will be allowed to enter upon the next year's studies, provided they pass examinations in the subjects failed in at the beginning of the session.

Examinations for advancement in course, graduation, and admission to advanced standing are held at the close of the year. In each laboratory course extending through a part of the year only, the examination is held at the close of the course.

Examinations for conditioned students and those desiring admission to advanced standing, who have not taken the spring examinations, are held during the week preceding the opening of the college.

The subjects examined upon are divided into major and minor subjects, and a standing of 75 per cent. is required to pass.

The minor subjects embrace laboratory courses and those in which instruction is given by recitations only.

Subjects of Examination for Admission to the Second Year.

Major Subjects..Anatomy (except surgical anatomy).

Physics.

Inorganic Chemistry (including laboratory work).

Minor Subjects..Histology (except the nervous system).

Embryology.

Comparative Morphology.

Materia Medica.

Conditions allowed (at the spring examinations): 1 Major and 1 Minor; or 2 Minor subjects.

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NOTE 1. In each of those branches in which recitations are held throughout the year, there shall be a written review conducted by the instructors and supervised by the professor in charge of the department, and also a final written review conducted by the professor himself at the close of the year. The written reviews conducted by the instructors shall be held as soon as possible after the return from the Christmas recess, and shall count as a single recitation, the object being to ascertain the knowledge acquired by the student.

NOTE 2. *All conditions must be successfully passed before entrance into the next succeeding year will be allowed.*

Subjects of Examination for Admission to the Third Year.

Major Subjects..Anatomy.

Organic and Physiological Chemistry.

Physiology.

Minor Subjects..Medicine.

Surgery.

Obstetrics.

Bacteriology.

Normal Histology (central nervous system and organs of special sense).

Pharmacology.

Laboratory Organic Chemistry.

Conditions allowed: 1 Major and 1 Minor; or 2 Minor subjects.

(See Notes 1 and 2 above.)

Subjects of Examination for Admission to the Fourth Year.

Major Subjects..Materia Medica.

Pathology.

Minor Subjects..Obstetrics.

Medicine.

Surgery.

Toxicology.

Clinical Pathology.

Pediatrics.

Neurology.

Gross Pathology.

Conditions allowed: 1 Major and 1 Minor; or 2 Minor.

(See Notes 1 and 2 above.)

**Subjects of Examination for Graduation at the End of the
Fourth Year.**

Major Subjects..Medicine.

Surgery.

Therapeutics.

Obstetrics.

Gynæcology.

Minor Subjects..Hygiene.

Ophthalmology.

Neurology.

Laryngology and Rhinology.

Orthopædics.

Pediatrics.

Psycho-pathology.

Otology.

Dermatology.

Genito-Urinary Diseases.

The examinations in the major subjects are allowed two hours, and in the minor subjects one hour each.

If any student fails to pass in not more than one major, or in two minor subjects, an examination may be allowed within two weeks, and if the candidate is then successful the degree will be conferred at the later Commencement at Ithaca.

If the candidate fails to pass in any subject at this second examination, the work of the fourth year must be repeated.

Requirements for Graduation.

1. Candidates for the degree of doctor of medicine must have studied medicine for four full years in an accredited medical college, and the fourth year at least must have been spent in the Cornell University Medical College.

2. Candidates must present satisfactory evidence of good moral character and of being not less than twenty-one years of age.

3. Candidates must file with the Secretary of the Faculty the requisite legal medical-student certificate as evidence of having complied with the requirements for admission.

4. Candidates must have dissected the whole cadaver at least twice (see page 36). They must, further, have taken the regular course of two weeks in practical obstetrics, and a certificate covering this course

must be filed at the Secretary's office before registration for the final examinations, which begin about the middle of May.

5. In addition to the yearly examinations above specified for advancement in course, candidates must pass at the end of the fourth year examinations in medicine, surgery, therapeutics, obstetrics, and gynecology, and the special branches which are specified on page 79.

6. Candidates rejected at the final examination will not be reëxamined until after having repeated their fourth year of study.

Before being readmitted to the fourth year the candidate may be required to pass a satisfactory examination in anatomy, physiology, chemistry and physics, and materia medica.

7. The degree will not be conferred upon any candidate who absents himself from the public Commencement without the special permission of the Faculty.

8. The Faculty reserves the right to terminate the connection of any student with the institution *at any time* on the ground of what they may deem moral or mental unfitness for the profession, or improper conduct while connected with the College.

Final Examination in the Subjects of the First and Second Years.

A recent law permits students to take part of their examinations for the license to practice medicine in this State at the end of the second year.

For full text of the law see page 25, this catalogue.

DIPLOMAS OF LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND MEMBERSHIP OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Graduates of the Cornell University Medical College are admitted to the final examination for the diploma of Licentiate of the Royal College of Physicians of London and Membership of the Royal College of Surgeons of England, upon presenting proper certificates that certain conditions applicable to the foreign universities and colleges which are recognized by the examining board have been complied with.

Further information may be obtained from the Secretary of the Board (Mr. F. G. Hallet) at the Examination Hall, Victoria Embankment, London, W. C.

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Prizes.

I. For general efficiency.

In commemoration of John Metcalfe Polk, an Instructor in this College, who graduated from the Medical Department of Cornell University on June 7th, 1899, and died on March 29th, 1904, an annual prize of \$500 will be presented at each Commencement to the members of the Graduating Class who have completed the full course of study in Cornell University Medical College.

This prize will be awarded as follows:

To the student having the highest standing.....\$300

To the student having the second highest standing....\$125

To the student having the third highest standing..... \$75

II. For efficiency in Neurology.

Two prizes, one of \$50 and another of \$25, are offered by Professor Dana to the students of the graduating class, to be designated by him, who make the two best reports of neurological cases seen during the course.

III. For efficiency in Otolology.

Two prizes, the first of \$50, the second of \$25, are offered by Professor Whiting to the two students of the graduating class to be designated by him, who make the best records in the practical and theoretical work in otology.

Hospital Appointments.

The students and graduates of the Cornell University Medical College are entitled to compete on equal terms with those of other colleges, for positions on the resident staff of Bellevue and the other hospitals of the city.

Some of these hospitals are: The City, Harlem, Gouverneur, New York, St. Luke's, Presbyterian, St. Vincent's, St. Francis', Mount Sinai, German and Hudson Street hospitals, New York Eye and Ear Infirmary, and the hospitals in Brooklyn and Jersey City, Newark, Paterson, etc.

The requirements, the times of examination, and the period of service differ. The details can be learned by application, written or in person, to the superintendents or to the secretaries of the medical boards of the various hospitals.

Special Courses.

The Medical Department will continue the System of Special Courses which has proved of advantage.

The courses are designed primarily for advanced students or for workers in specialized lines of research or for post-graduates. They are scheduled to begin at various times, and to continue about six weeks. These courses include different portions of the subjects of normal histology; clinical, gross, and histological pathology; bacteriology, chemistry, anatomy, and operative surgery.

A pamphlet giving full details can be obtained by application to the Secretary of the College.

Suggestion.

It would be to the advantage of students if they would register a few days in advance of the opening exercises, secure boarding-places, and purchase books, so that their studies may not be interrupted in the beginning. The Secretary's office is open every day after September, from 10 A.M. to 5 P.M.

TEXT-BOOKS.

As a rule, only the latest editions of text-books should be purchased.

Anatomy.—Text-Book, Cunningham, *Text-Book or Anatomy*, \$6.00; Gerrish, second edition, \$6.50; Reference Works, Morris, \$6.00; Gray, \$5.50; Hughes and Keith, *Manual of Practical Anatomy*, 3 vols.; Quain, \$25.20; Woolsey, *Surgical Anatomy*, \$5.00; Toldt, *Atlas of Human Anatomy*, \$18.00; Cunningham's *Dissector*, 2 vols., \$5.00.

Bacteriology.—Muir and Ritchie, *Manual of Bacteriology*, \$3.75; Park, *Bacteriology*; Sternberg, *Manual of Bacteriology*, \$5.00.

Chemistry.—Witthaus, *Manual of Chemistry*, sixth edition, \$3.50; Wolf, *Laboratory Handbook*, \$1.25; Ganot, *Physics*, \$4.00; Riggs, *Laboratory Chemistry*, \$1.00.

Dermatology.—J. Nevins Hyde, \$4.50; H. Radcliffe Crocker, third edition, \$5.00; H. Stelwagon, \$6.00.

Diseases of Children.—Henry Ashby, *The Diseases of Children*, fifth edition; Starr, *An American Text-Book of the Diseases of Children*, \$7.00; Rotch, *Pediatrics*, \$6.00; Welch and Schomberg, *Acute Contagious Diseases*.

Genito-Urinary.—White and Martin, \$6.00; Hyde and Montgomery, \$4.00; Keyes and Chetwood, \$2.75.

Gynæcology—Penrose, \$3.75; Dudley, \$5.00; Garrigues, *Diseases of Women*, \$4.50; Findley, *Diagnosis*, \$4.75.

Histology—Ferguson, *Text-Book of Histology*, \$4.00; Bohm, David-off, and Huber, *Text-Book of Histology*, \$3.50.

Hygiene—Egbert, *Hygiene and Sanitation*, \$2.25; Notter, *Theory and Practice of Hygiene*, \$7.00; Bergey, *Text-Book of Hygiene*, \$1.50.

Laryngology and Rhinology—Knight, *Diseases of the Nose and Throat*, \$3.00; Grünwald, *Atlas of Diseases of the Larynx*, \$2.50; Grünwald, *Atlas of Diseases of the Mouth, Pharynx, and Nose*, \$3.00.

Materia Medica and Pharmacology—Text-book, Sollmann, *A Text-Book of Pharmacology*, \$4.00.

Collateral Reading—Cushny, *Pharmacology and Therapeutics*, \$4.00; Schmiedeberg, *Pharmacologie*; Heinz, *Handbuch der experiment. Path. und Pharmacologie*; Kobert, *Lehrbuch der Intoxicationen*; Hatcher and Sollmann, *A Text-Book of Materia Medica*, \$2.00; Coleman, *A Syllabus of Materia Medica*, \$1.00; Caspari, *Treatise on Pharmacy*, \$4.25.

Medicine—Osler, *Practice of Medicine*, \$5.00; Tyson, *Physical Diagnosis*, \$1.50; Salinger-Kalteyer, *Modern Medicine*, \$4.00; Musser, *Medical Diagnosis*, \$6.00; Butler, *Diagnosis*, \$6.00.

Nervous Diseases—Dana, *Diseases of the Nervous System and Psychiatry*, \$4.00; Gower, *Diseases of the Brain and the Spinal Cord*, \$8.00; Dercum, \$6.00; Obersteiner, *Anatomy of the Nervous System*, \$5.50; Mills, Starr, Sachs.

Obstetrics—Edgar, *Practice of Obstetrics*, \$6.00.

Ophthalmology—Noyes, \$5.00; De Schweinitz, \$4.00; Swanzy, \$2.50; Jackson, \$2.50; Nettleship, \$3.00; Fuchs, \$5.00.

Orthopædic Surgery—Bradford and Lovett, \$4.50.

Otology—Bacon, *On the Ear*, \$2.25; Politzer, *Diseases of the Ear*, \$7.00; Macewen, *Pyogenic Infective Diseases of the Brain and Spinal Cord*, \$4.00; Whiting, *The Modern Mastoid Operation*, \$6.00.

Pathology—Delafield and Prudden, *Pathological Anatomy and Histology*, \$5.00; Orth, *Pathological Diagnosis* (Trans. of Sydenham Society); Ziegler, *General Pathology*, \$5.00; Ewing, *Pathology of the Blood*, \$3.50; Minots, *Embryology*, \$4.50.

Clinical Diagnosis—Wood's *Chemical and Microscopical Diagnosis*; V. Jaksch, \$6.50; Ewing, *Pathology of the Blood*, \$3.50; Emerson, *Clinical Diagnosis*.

Physiology—Kirke's *Handbook of Physiology*, twentieth edition,

\$3.00; Flint, *Handbook of Physiology*, fifth edition, 1905; Stewart, \$3.75; Foster, \$3.60; Schäffer, \$18.00; Howell, —.

Psychopathology—Dana, *Nervous Diseases and Psychiatry*, \$4.00; Patton, *Psychiatry*, \$4.00; Kraepelin, *Clinical Psychiatry*, \$3.50.

Surgery—Rose and Carless, \$5.50; *American Text-Book*; Parks, *Surgery*, \$6.00; Stimson, *Fractures and Dislocations*, \$5.00; Stimson, *Operative Surgery*, \$3.00; Dennis, *System of Surgery*, \$6.00 per volume.

Gould's *Student's Medical Dictionary*, \$2.50.

Dissecting Cases—\$2.00 to \$5.00.

Text-books, etc., may be obtained from the Clerk at the College.

ITHACA DIVISION



STIMSON HALL

FACULTY OF MEDICINE AT ITHACA.

BURT GREEN WILDER, B.S., M.D.,

Professor of Neurology and Vertebrate Zoölogy.

EDWARD LEAMINGTON NICHOLS, B.S., Ph.D., LL.D.,

Professor of Physics.

SIMON HENRY GAGE, B.S.,

Professor of Histology and Embryology, Emeritus.

VERANUS ALVA MOORE, B.S., M.D.,

Professor of Comparative Pathology and Bacteriology.

LOUIS MUNROE DENNIS, Ph.B., B.S.,

Professor of Inorganic Chemistry.

WILLIAM RIDGELY ORNDORFF, A.B., Ph.D.,

Professor of Organic Chemistry.

ERNEST GEORGE MERRITT, M.E.,

Professor of Physics.

ABRAM TUCKER KERR, B.S., M.D.,

Professor of Anatomy.

BENJAMIN FREEMAN KINGSBURY, Ph.D., M.D.,

Professor of Histology and Embryology.

SUTHERLAND SIMPSON, D.Sc., M.D.,

Professor of Physiology.

GEORGE SYLVANUS MOIER, A.B., B.M.E.,

Assistant Professor of Physics.

EMILE MONNIN CHAMOT, B.S., Ph.D.,

Assistant Professor of Sanitary Chemistry and Toxicology.

FACULTY OF MEDICINE AT ITHACA.

JOHN SANFORD SHEARER, B.S., Ph.D.,

Assistant Professor of Physics.

ERNEST BLAKER, B.S., Ph.D.,

Assistant Professor of Physics.

ARTHUR WESLEY BROWNE, M.S., Ph.D.,

Assistant Professor of Inorganic and Analytical Chemistry.

HUGH DANIEL REED, B.S., Ph.D.,

Assistant Professor of Neurology and Vertebrate Zoölogy.

SAMUEL HOWARD BURNETT, A.B., M.S., D.V.M.,

Assistant Professor of Comparative Pathology and Bacteriology.

ANDREW HUNTER, M.A., B.Sc., M.B., Ch.B.,

Assistant Professor of Biochemistry.

EUGENE BAKER, B.S., M.D.,

Lecturer on Obstetrics and Practice of Medicine.

MARTIN BUEL TINKER, B.S., M.D.,

Lecturer on Surgery.

RALPH CUTHBERT SNOWDON, A.B.,

Instructor in Chemistry.

THOMAS DELBRIDGE, A.B., Ph.D.,

Instructor in Chemistry.

MELVIN DREBACH, M.S., M.D.,

Instructor in Physiology and Pharmacology.

JOSEPH H. HATHAWAY, A.M., M.D.,

Instructor in Anatomy.

WALTER JENNINGS TAYLOR, D.V.M.,

Instructor in Pathology and Bacteriology.

WESLEY MANNING BALDWIN, A.B.,

Instructor in Anatomy.

HARRY WESTFALL REDFIELD, B.S.,

Instructor in Chemistry.

FACULTY OF MEDICINE AT ITHACA.

J. PARSONS SCHAEFFER, A.B., M.D.,

Instructor in Anatomy.

WILLIAM A. HILTON, Ph.D.,

Instructor in Histology and Embryology.

JOHN ALEXANDER BLACK, A.B.,

Assistant in Chemistry.

ALBERT HAZEN WRIGHT, A.B., A.M.,

Assistant in Neurology.

FLOYD ROBINS WRIGHT, A.B., M.D.,

Demonstrator in Anatomy.

WILLIAM HUTCHENS BOYNTON, D.V.M.,

Assistant in Bacteriology.

EDWIN FREDERICK RATHJEN, A.B., A.M.,

Assistant in Chemistry.

HENRY RICHARD MULLER,

Assistant in Neurology.

BENONI AUSTIN PLACE, A.B., A.M.,

Assistant in Histology and Embryology.

ROBERT D. SCHROCK, A.B.,

Assistant in Physiology and Pharmacology.

DAVID SHEPARD PRATT,

Assistant in Chemistry.

THOMAS WHITNEY BENSON WELSH,

Assistant in Chemistry.

WILLETS WILSON, Ph.G., M.D.,

Assistant in Pharmacology.

C. H. WATERS, A.B.,

Assistant in Histology and Embryology.

MICHAEL HENRY LANE, B.S.,

Assistant in Histology and Embryology.

ABRAM T. KERR, B.S., M.D.,

Secretary of the Medical Faculty at Ithaca.

INSTRUCTION AT ITHACA

DURING THE FIRST TWO YEARS OF THE COURSE.

CALENDAR FOR ITHACA.

First Term, 1908-1909.

September 29th, Tuesday.—Academic year begins; matriculation of new students; University scholarship examinations begin.
September 30th, Wednesday.—Matriculation of new students.
October 1st, Thursday.—Registration of matriculated students.
October 2d, Friday.—Instruction begins in all departments of the University at Ithaca. President's annual address to students at 12 M.
December 22d, Tuesday.—Instruction ends.
January 6th, Wednesday.—Instruction resumed.
January 11th, Monday.—Founder's Day.
January 27th, Wednesday.—First term closes.

Second Term.

January 30th, Saturday.—Registration for the second term.
April 2d, Friday.—Instruction ends.
April 13th, Tuesday.—Instruction resumed.
June 10th, Thursday.—Instruction ends.
June 17th, Thursday.—Forty-first annual Commencement.

General Statement.

From its very foundation Cornell University has offered special courses for students preparing for the study of Medicine; first in the Natural History course, and later also in a special two-year Medical Preparatory course. In 1898, the Medical College was established in New York City with a four-years' course. At the same time the work of the first two years was duplicated at the University in Ithaca, since many of the fundamental scientific subjects of which this part of the course mainly consists were already provided for in the long-established

departments of Botany, Zoölogy, Comparative Anatomy, Physics, Chemistry, Physiology, Histology, Embryology, and Bacteriology. The courses in these departments were modified where necessary and additional courses were added so as to make the work at Ithaca fully equivalent to the first two years in New York City.

Among the facilities of the University of special value to the Medical College may be mentioned the museums of Vertebrate and Invertebrate Zoölogy, including Entomology and Comparative Anatomy, of Agriculture, of Botany, of Geology, and of Veterinary Medicine. The University Library, with its 328,394 bound volumes, 48,000 pamphlets, and over 2,000 current periodicals and transactions, is as freely open to medical students as to other University students.

Through the generosity of the late Dean Sage, of Albany, the University has been enabled to erect a building especially designed for anatomy, histology, embryology, and physiology. The building is constructed of Ohio sandstone. The general form is that of an E, 157 feet long and 50 feet wide, with wings 40 feet square.

In the cellar are the cold-storage, embalming, and cremating rooms and store-rooms, and a large room forty feet square for aquaria, projection, etc.

In the basement are the ventilating and cold-storage machinery, a large lecture room, a recitation room, and an office for the departments of surgery, medicine, and obstetrics, besides the lower part of the large amphitheatre.

On the first floor are located the cloak rooms for men and women, college office, library, faculty room, office, and private laboratory for histology, two recitation rooms, upper part of the large amphitheatre, and assembly room.

The second floor is devoted to the departments of histology and physiology, each with a large general laboratory, a research laboratory, preparation rooms, and the private laboratories for the staff of instruction.

The third floor consists of the general and special dissecting rooms, study rooms, and amphitheatre, besides rooms for the staff.

The attic is utilized for photography, macerating the skeletons, and for storage.

The air in the building is constantly changed by forced ventilation. The lighting is especially good in all the rooms, as shown by the picture opposite page 85.

DEPARTMENTS, METHODS, AND FACILITIES.

ANATOMY.

ABRAM T. KERR, B.S., M.D., *Professor.*

JOSEPH H. HATHAWAY, A.M., M.D., *Instructor.*

WESLEY M. BALDWIN, A.B., *Instructor.*

J. PARSONS SCHAEFFER, A.B., M.D., *Instructor.*

FLOYD ROBINS WRIGHT, A.B., M.D., *Demonstrator.*

Anatomy is given in both the first and second years and is mostly concentrated into the first term. This gives a large amount of continuous time for the subject, which consists mainly of practical work in the laboratory. Each student is independent of the others, and those with special training or ability are encouraged to do more than the required work. Personal quizzes and demonstrations are given upon each stage of the work. In addition to this, there are frequent recitations and demonstrations to small sections of the class. The students are encouraged to make careful notes and drawings of the conditions which they find in their specimens. To facilitate the drawings, outline record charts are furnished. Clay also is provided for modelling bones and other parts. The department is well equipped with models and special preparations. These are for use in the demonstrations and also for the personal use of students in the laboratory.

There is plenty of dissecting material, which is embalmed and kept in cold storage so as to be ready for use when needed. In the two years the student is required to make at least one complete satisfactory dissection of the human body. The work is distributed as follows:

In the first year, thirty-two and a half hours per week are given to Anatomy. A complete disarticulate skeleton is loaned to each student. The vertebræ and ribs and the bones of the upper extremity are studied first, and when these are finished the dissection of the upper extremity is begun. The study of this first part completed, the bones and then the soft parts of the head, except the brain, are considered. The lower

extremity is studied in a similar manner. As a preparation for the second term's work in Histology and Physiology, an elementary course of demonstrations on the gross anatomy of the viscera is given near the end of the term.

In the second year, first term, twenty-five hours a week are devoted to laboratory work. The thoracic and abdominal viscera and central nervous system are dissected. The work on the viscera is given in the first part of the term, and the dissection is accompanied by special recitations and demonstrations to small groups. The gross anatomy of the central nervous system comes in the latter part of the term. In the second term of the second year, five demonstrations or recitations each week on topographical and regional anatomy are given to small sections of the class. In these the work of the preceding two years is reviewed, dissections are shown, and the practical bearing of Anatomy on Medicine and Surgery is particularly emphasized.

Those who satisfactorily complete the required work and others properly qualified may do advanced or research work.

1. Anatomy.—Laboratory work with section demonstrations and recitations, thirty-two and a half actual hours weekly from October 2d to January 27th: (a) The upper extremity, 4 credits; (b) the head and neck, $5\frac{1}{2}$ credits; (c) the lower extremity, $3\frac{1}{2}$ credits. Course 1 is required of first-year medical students. Professor Kerr, Instructors Hathaway, Baldwin, Schaeffer, and Demonstrator Wright.

2. Anatomy.—Laboratory work with section demonstrations and recitations twenty-two and a half actual hours weekly. October 2d to January 27th: (a) Abdominal and pelvic walls and viscera; (b) thoracic walls and viscera. Course 2 is required of second-year medical students. Professor Kerr, Instructors Hathaway, Baldwin and Schaeffer, and Demonstrator Wright.

3. Topographical and Regional Anatomy.—Section demonstrations and recitations five hours weekly. February 1st to June 10th. Required of second-year students in Medicine. Credit, 2 hours. Instructor Hathaway and Demonstrator Wright.

4. Thoracic and Abdominal Viscera.—Section demonstrations two and a half hours weekly. Required of second-year students in Medicine. September to February. Credit, 1 hour. Instructor Hathaway.

5. Structure, Development, and Physiology of the Nervous System and the Organs of Sense.—Credit, three or five hours. Second year. Professors Simpson, Kerr, and Kingsbury. The course

consists of three parts: (a) Gross Anatomy, with special reference to Medicine and Surgery, Dr. Kerr; (b) Histology and Development, Professor Kingsbury; (c) Physiology, Professor Simpson. The instruction in each part consists of laboratory work, demonstrations or lectures, and recitations. The Gross Anatomy is given during the last month of the first term, the Histology and Development and the Physiology in the first term.

6. Advanced and Research Work.—Laboratory work. Elective. Eight or more actual hours per week. Professor Kerr and Instructors.

7. Anatomy Recitations.—Upper extremity, head and neck, lower extremity. October 2d to January 27th. Elective. Hours to be arranged. Instructor Baldwin.

8. Eye, Ear, Nose, Pharynx, Larynx, and Other Special Organs.—Demonstrations February 1st to June 10th. Hours to be arranged. Elective. Instructor Hathaway.

9. Anatomy Recitations.—Abdominal, pelvic, and thoracic viscera. October 2d to January 1st. Elective. Hours to be arranged. Instructor Baldwin.

10. Anatomy Recitations.—Central nervous system. January 1st to February 1st. Elective. Hours to be arranged. Instructor Baldwin.

HISTOLOGY AND EMBRYOLOGY.

B. F. KINGSBURY, Ph.D., M.D., *Professor.*

WILLIAM A. HILTON, Ph.D., *Instructor.*

MICHAEL HENRY LANE, B.S., *Assistant.*

BENONI AUSTIN PLACE, A.B., A.M., *Assistant.*

C. H. WATERS, A.B., *Assistant.*

As indicated by the following courses, this department offers elementary and advanced instruction in the theory and use of the microscope and its accessories, in photo-micrography, in vertebrate histology, and vertebrate embryology; and opportunities for research in all of these subjects.

The material equipment consists of a good supply of modern microscopes, while camera-lucidas, polariscopes, micro-spectroscopes, photo-micrographic cameras, microtomes and other special apparatus are in

sufficient numbers to give each student opportunity for personally learning to use them, and for applying them to any special study in which they are called for. Two projection microscopes are available for class demonstrations and for making the drawings used in wax-plate reconstruction. The collection of histologic and embryologic specimens is extensive and constantly increasing.

The rooms for the use of the department are on the second floor of Stimson Hall. They are almost perfectly lighted and consist of a large general laboratory, an advanced laboratory, a preparation room, and two laboratories for the instructing staff, where also special demonstrations of difficult subjects are given to small groups of students.

The aim of the department is to bring the student into direct contact with the truths of nature, and hence, while there are demonstration lectures to give broad and general views, there is a large amount of laboratory work in which the facts are learned at first hand, and the methods and manipulations necessary for acquiring the facts are practised by each student. It is recognized that less ground can be covered in a given time in this way, but it is believed, and experience has confirmed the belief, that the intellectual independence and power to acquire knowledge direct from nature which is gained by this personal work is of far higher value than the facts and theories that might be learned in the same time from books and lectures alone, or from specimens prepared by some other individual.

This lake region with its rich and varied fauna is especially favorable for investigation in the histology and embryology of all the main groups of vertebrates; and the proximity of the abattoirs in the city makes it possible to obtain material for the study of the development of the sheep, cow, and pig. The clinic and veterinary department supply material for the embryology of the cat and dog, so that the opportunities for research upon the development of the domestic animals are excellent. Every encouragement is given for the fullest utilization of these opportunities.

1. Microscopy, Histology, and Embryology.—Second half-year. Credit, 8 University hours. The instruction is given in two recitations, twelve hours of laboratory work, and one or more lecture-demonstrations weekly during the second half-year. Professor Kingsbury and Instructor Hilton and assistants.

Microscopy.—The aim is to give a working knowledge of the theory and use of the microscope and its accessories, methods of mounting

microscopical specimens, etc. It serves as a basis for all subsequent work of the department.

Histology.—This includes the study of the fine anatomy of man and of the domestic animals, and also the fundamental methods of histologic investigation and demonstration.

Embryology.—This deals with the elements and methods of embryology in the amphibia, in the domestic animals, especially the chick and the pig, and in man.

5. Structure, Development, and Physiology of the Nervous System and the Organs of Sense.—Credit, three or five hours. Second year. Professors Simpson, Kerr, and Kingsbury. The course consists of three parts:—(a) Gross Anatomy, with special reference to Medicine and Surgery, Dr. Kerr; (b) Histology and Development, Professor Kingsbury; (c) Physiology, Professor Simpson. The instruction in each part consists of laboratory work, demonstrations or lectures, and recitations. The Gross Anatomy is given during the last month of the first term, the Histology and Development and the Physiology in the first term.

7. Advanced Work in Histology and Embryology.—Laboratory, eight or more actual hours per week with seminary throughout the year. This course is designed for those preparing theses for the baccalaureate or advanced degrees and for those wishing to undertake special investigations in histology and embryology. Special instruction will be given in the theory and manipulation of the more important and difficult accessories of the microscope, *e.g.*, the micro-spectroscope, the micro-polariscope, and the apertometer. The use and application of the projection microscope and of photo-micrographic apparatus will be learned by each student, in abundant practical experiments. Professor Kingsbury.

Course 7 is open only to those who have taken Course 1 or 2, or its equivalent in some other university. Drawing (Course 12c, in Free-hand Drawing, or its equivalent) and a reading knowledge of French and German are indispensable for the most successful work in this course.

Subjects for theses should be decided upon as early as possible so that material in suitable stages of development and physiologic activity may be prepared.

Course 1 is required of first-year students; course 5 of second-year students in Medicine.

8. Seminary.—Hours to be arranged. At the seminary, there will be presented reports of special methods and the results of advanced work. Professor Kingsbury.

NOTE.—For the work of this department the student will find a knowledge of Latin and Greek of the greatest advantage. A year's study of Latin, three to five recitations per week, and of Greek, Goodell's Greek in English, or Coy's Greek for beginners, would represent the minimum amount needed. For all courses, the ability to draw well freehand and a good reading knowledge of French and German are desirable, and for research work almost indispensable.

VERTEBRATE ZOOLOGY AND NEUROLOGY.

BURT GREEN WILDER, B.S., M.D., *Professor.*

HUGH DANIEL REED, B.S., PH.D., *Assistant Professor.*

ALBERT HAZEN WRIGHT, A.B., PH.D., *Instructor.*

HENRY RICHARD MULLER, *Assistant.*

3. Morphology of the Brain (lectures only). Second term. Credit, 1 hour. One lecture, Thursday at 11. There are considered (a) the various types of vertebrate brain, beginning with that of the acanth shark (*Squalus acanthias*); (b) the development and morphology of the human brain; (c) its resemblances and peculiarities; (d) the cerebral fissures as criteria of zoölogic or racial affinity, as indexes of physical or mental quality or power, and as boundaries of functional areas. For the illustration of this course there are numerous diagrams representing actual preparations of the brains of man, apes, and other vertebrates. Specimens and models are freely employed; see Course 3a. Members of the class should arrange to remain during at least part of the hour following the lecture in order to examine the specimens. Professor Wilder.

3a. Morphology of the Brain (practicums only). Second term. Credit, 1 hour. One practicum in two sections at hours to be arranged on Friday, and on Saturdays, 10-12:30. Beginning with the brain of the acanth shark, so far as practicable the forms examined parallel and supplement those discussed in Course 3. The actual dissections of mammalian brains are done on those of the cat and sheep, but each member of the class is enabled to study and draw museum specimens from many groups, including monkeys, apes and men, prepared to exhibit special features. The neurologic division of the museum com-

prises about 1,600 specimens distributed as follows:—Human adults and children, 430; human embryo, fetal and at birth, 118; apes and monkeys, 292; other mammals, 420; other vertebrates, 240. Professor Wilder and Mr. Muller.

PHYSIOLOGY.

SUTHERLAND SIMPSON, D.Sc., M.D., *Professor.*

ANDREW HUNTER, M.A., B.Sc., M.B., Ch.B., *Assistant Professor.*

MELVIN DRESBACH, M.S., M.D., *Instructor.*

———, *Assistant.*

———, *Assistant.*

———, *Assistant.*

The work in the department is carried on by means of lectures, demonstrations, laboratory work, and recitations. The laboratory course is intended to introduce the student to methods of laboratory work in Physiology, to have him become acquainted with certain fundamental facts at first hand and to learn to draw conclusions from the facts. The part of Physiology so taken up in the laboratory covers the Physiology of muscle, nerve, heart and circulation, blood (in part), eye, and central nervous system. Special stress is laid on the points and apparatus of importance in later clinical work.

The recitations cover the entire field of Physiology.* Numerous demonstrations are given in the laboratory to supplement the lecture-demonstrations and student experiments.

The lectures are intended to unify the work of the Department.

As occasion demands, quizzes or demonstrations may be substituted for the lectures.

The physiology of the central nervous system and organs of sense is given in the second year, after the student has had preparatory work on the anatomy and histology.

The physiology of digestion, excretion, and metabolism is likewise taken up in the second year, in connection with the work in physiological chemistry. The last half of the work of the second year (Course 4) is taken up by a review covering the entire field of physiology, preparing the student for the final and State Board examinations.

For courses open to students in the College of Arts and Sciences, see Courses 3, 5, 7 and 9.

1. Physiology of Movement, Sensation, Circulation, and Respiration.—Credit, 8 University hours. Five three-hour periods per week. The course includes laboratory work accompanied by two or more recitations or quizzes, one or more demonstrations, and one or more lectures. Required of first-year students of medicine. Second half-year. Professor Simpson, Instructor Dresbach and Assistants.

3. Elementary Human Physiology.—First term. Three hours. Lectures or demonstrations upon the Physiology of the body. Designed for students who expect to teach physiology in the secondary schools, or as an introductory course for students of the Biological Sciences. Professor Simpson.

4. The Physiology of Digestion, Absorption, Metabolism, and Excretion.—One recitation or demonstration per week in assigned sections. Required of second-year students of medicine. Credit, 1 hour. Second half-year.

5. Structure, Development, and Physiology of the Nervous System and the Organs of Sense.—Credit, three or five hours. Second year. Professors Simpson, Kerr, and Kingsbury. The course consists of three parts: (a) Gross Anatomy, with special reference to Medicine and Surgery, Dr. Kerr; (b) Histology and Development, Professor Kingsbury; (c) Physiology, Professor Simpson. The instruction in each part consists of laboratory work, demonstrations or lectures, and recitations. The Gross Anatomy is given during the last month of the first term, the Histology and Development and the Physiology in the first term.

7. Research and Advanced Work in Physiology.—Eight or more actual hours per week. Assistant Professor Kingsbury and Instructor Dresbach.

11. Biochemistry.—Second term. Two lectures or recitations and seven actual hours' laboratory work per week in assigned sections. Required of second-year students of medicine. Assistant Professor Hunter and Assistants.

12. Biochemistry.—Advanced course. Laboratory work at hours to be arranged. Assistant Professor Hunter.

Course 1 is required of first-year and Courses 4, 5, and 11 of second-year students of medicine.

Course 3 should be preceded or accompanied by Course 4 or 2 in Vertebrate Zoölogy. It may with advantage be preceded or followed by Course 2 or 3 in Histology and Embryology.

Course 9 must be preceded by Course 1 or Course 3, or their equivalents.

For courses in Comparative Physiology, see University Register.

PHARMACOLOGY.

Staff.

———, ———, *Professor.*

MELVIN DRESBACH, M.S., M.D., *Instructor.*

WILLETS WILSON, Ph.G., M.D., *Assistant.*

ROBERT D. SCHROCK, A.B., *Assistant.*

Three sides of the subject of Pharmacology are taken up in a unified course, consisting of Pharmacy, Materia Medica and Pharmacodynamics. In the year 1908-1909 the course will be given in the first term. It will include lectures, recitations, and demonstrations and laboratory work. During the first half of the term the subdivisions of Pharmacology are considered in preliminary lectures, and the subject of the active principles of drugs, their characters, solubilities and important tests, is presented in lecture demonstrations. Laboratory practice accompanies the class-room work, opportunity being given for the student to familiarize himself with the crude drugs and the methods of extracting their important constituents. The different types of pharmaceutical compounds are made, incompatibilities to be avoided are learned, and prescription writing is begun.

During the second half term the subjects of Materia Medica proper and Pharmacodynamics are studied. The sources of drugs, together with their chemical and physical characters, active principles, and dosage are taken up in detail, and the prescription form is reviewed and practice given therein. Along with the class-room work in Materia Medica a study is made of the physiological action of important drugs upon the living tissues. This work is experimental, ample opportunity being given in the laboratory to observe, study and record the effects of drugs under consideration. The student is required to report upon the results, which are then discussed in the class-room. The more difficult experiments are given in demonstrations.

The aim is to give the student an adequate idea of medicinal agents as they exist in their natural and commercial forms, as they are used in practice and as they act when administered. Advanced work in Phar-

macology is encouraged, the laboratory being well fitted for work along various lines.

1. Pharmaceutic Practice and Prescription Writing.—In sections. Two hours' laboratory (or demonstrations) and one recitation weekly. Second year. First term. Instructor Dresbach, Dr. Wilson, and Assistants.

2. Materia Medica and Pharmacodynamics.—Three hours' laboratory (or demonstration) and two recitations weekly. In sections. Second year. First term. Instructor Dresbach, Dr. Wilson, and Assistants.

3. Research Work and Special Pharmacology.—This may consist of (a) selected experiments upon the action of drugs, or (b) research along special lines. Five or more hours per week. Professor ——— and Instructor Dresbach.

PHYSICS.

EDWARD LEAMINGTON NICHOLS, B.S., Ph.D., LL.D., *Professor.*

ERNEST GEORGE MERRITT, M.E., *Professor.*

GEORGE SYLVANUS MOLER, A.B., B.M.E., *Assistant Professor.*

JOHN SANFORD SHEARER, B.S., Ph.D., *Assistant Professor.*

ERNEST BLAKER, B.S., Ph.D., *Assistant Professor.*

The required instruction in physics is by means of lectures throughout one half year. In these lectures the general laws of mechanics and heat, electricity and magnetism, and sound and light are presented. The very large collection of lecture-room apparatus possessed by the department makes it possible to give experimental demonstrations of all important phenomena. The arrangements for experimental work are most complete. Ordinary illuminating gas, acetylene, oxygen and hydrogen, compressed air, water and steam, blast and vacuum are within easy reach, and electric currents from alternating and direct current dynamos and from storage batteries are available.

The required course in physics for medical students consists of four lectures a week for one term, and the reading of a text-book. Note-books prepared by members of the class are inspected at frequent intervals. A longer course, consisting of four lectures a week for one term, followed by four recitations a week, and one afternoon in the laboratory for one year, is likewise open to medical students, and all those who can find the time to do so, are urged to take this course

in place of the required work mentioned above. It should be chosen in preference to the latter by all who wish to prepare themselves for advanced work in the biological sciences. The lectures in this course are supplemented by thorough drill upon the principles of the science, and this, together with the laboratory practice, affords opportunity for a much more adequate knowledge than can be obtained from any course that consists solely of lectures.

The department offers a course in practical photography (Physics, 18; 2 hours either term), consisting of lectures and laboratory practice. This course is open to students of medicine who have completed Physics 1 and Chemistry 1 or their equivalent.

1. Elementary Physics.—Four lectures weekly, with demonstrations, for one term. Required of first-year students in Medicine. Professor Nichols, Merritt, or Shearer.

For additional courses in Physics, see University Register.

CHEMISTRY.

LOUIS MUNROE DENNIS, Ph.B., B.S.,
Professor of Inorganic Chemistry.

WILLIAM RIDGELY ORNDORFF, A.B., Ph.D.,
Professor of Organic Chemistry.

EMILE MONNIN CHAMOT, B.S., Ph.D.,
Assistant Professor of Sanitary Chemistry and Toxicology.

ARTHUR WESLEY BROWNE, M.S., Ph.D.,
Assistant Professor of Inorganic and Analytical Chemistry.

Instructors in Chemistry.

RALPH CUTHBERT SNOWDON, A.B.,
THOMAS G. DELBRIDGE, A.B., Ph.D.,
HARRY WESTFALL REDFIELD, B.S.

Assistants in Chemistry.

THOMAS WHITNEY BENSON WELSH,
EDWIN FREDERICK RATHJEN, A.B., A.M.,
DAVID SHEPHARD PRATT, A.B.,

Inorganic Chemistry.—The elements of Inorganic Chemistry are taught by lectures, laboratory work, and recitations. The lectures are

profusely illustrated by experiments and lantern projection, and while presenting the fundamental concepts of chemical theory, are also largely descriptive in character. Experiments illustrating the principles discussed in the text-book are performed in the laboratory by each student.

Qualitative Analysis.—The qualitative analysis begins with the study of such reactions of the commoner elements and their compounds as are used in their detection. This is followed by the practical application of the knowledge thus gained to the analysis of unknown substances, both in the solid form and in solution. The work is accompanied by thorough drill in the writing of chemical equations.

Organic Chemistry, or the Chemistry of the Compounds of Carbon.—In this course the study of the typical compounds of carbon, their properties, reactions, and relations to one another, is taken up, especial attention being given to those organic substances that are of physiological importance. The course consists of lectures and recitations, supplemented by frequent written examinations. The lectures are fully illustrated by experiments, specimens of the compounds considered, and charts.

Toxicology.—This course is intended to serve as an introduction to the methods employed for the separation and identification of the common poisons, inorganic and organic. Special attention is given to the identification of poisons when present in organic matter, such as animal excretions and tissues, medicines, etc. This course also includes the identity tests for a few synthetic remedies.

1. Introductory Inorganic Chemistry.—Three lectures, one recitation and five hours of laboratory work, weekly. First half-year. Professor Dennis and Assistant Professor Browne, and Mr. Welsh.

8. Qualitative Analysis.—One lecture and five hours of laboratory work, weekly. Second half-year till April 21st. Mr. Snowdon and Mr. Rathjen.

81. Toxicology.—One lecture and five hours' laboratory work weekly. Second half-year after April 21st. Assistant Professor Chamot and Messrs. Redfield and Pratt.

32. Elementary Organic Chemistry.—Two hours' lectures and written reviews. Second half-year. Dr. Delbridge.

Courses 1, 8, 81, and 32 are required in the first year of the medical course.

For additional courses in Chemistry, see University Register.

BACTERIOLOGY.

VERANUS ALVA MOORE, B.S., M.D., *Professor.*

SAMUEL HOWARD BURNETT, A.B., M.S., D.V.M., *Assistant Professor.*

WALTER JENNINGS TAYLOR, D.V.M., *Instructor.*

WILLIAM H. BOYNTON, D.V.M., *Assistant.*

The instruction in Bacteriology is given by means of lectures, recitations, and laboratory work. The bacteriological laboratories are well supplied with the best modern apparatus. The student will, under proper supervision, prepare culture media, make cultures, and study the morphology of bacteria in both the fresh (living) condition and in stained cover-glass preparations. In fact, all of the technique necessary for a practical working knowledge in bacteriology will be carefully covered. The more important species of pathogenic bacteria will be studied. The special methods which are necessary for diagnosing such diseases as tuberculosis, anthrax, glanders, and diphtheria will receive careful attention. Disinfection, sterilization, the means by which pathogenic bacteria are disseminated, protective inoculation, and other kindred subjects will be considered.

43. Bacteriology.—Two lectures and ten hours' laboratory work each week. Second half-year. Required of second-year medical students. Professor Moore and Instructor Taylor.

44. Research in Bacteriology.—Laboratory work with lectures and seminary throughout the year. Professor Moore and Dr. Taylor. The course is designed for those wishing to undertake original investigation in Bacteriology preparatory to practical work in bacteriological lines, such as exists in health department laboratories. This course is open to students who have taken Course 43 or its equivalent in some other university. Elementary chemistry and a reading knowledge of French and German are indispensable for successful work in this course.

GENERAL PATHOLOGY.

VERANUS ALVA MOORE, B.S., M.D., *Professor.*

SAMUEL HOWARD BURNETT, A.B., M.S., D.V.M., *Assistant Professor.*

WALTER JENNINGS TAYLOR, D.V.M., *Instructor.*

WILLIAM H. BOYNTON, D.V.M., *Assistant.*

The course in Pathology consists of lectures, recitations, and laboratory work in pathological histology. The student will also be given

instruction in describing gross pathological specimens, but the major part of the work in the laboratory will consist in studying sections of diseased tissue and making drawings from the same. In this course it is expected that the student will become familiar with the terms used in morbid anatomy, together with a definite knowledge of the more important changes found in inflammation and the various forms of infiltrations and degenerations.

40. Pathology.—Two lectures or recitations and six hours' laboratory work each week. First term to Christmas vacation. Professor Moore, Instructors Burnett and Taylor. This course is open to students who have had Course 1 in Microscopy.

45. Research in Pathology.—Laboratory work throughout the year. Professor Moore and Instructor Burnett. This course is open to students who have taken Course 40 and have taken or are taking Course 43, or the equivalent in some other university.

SURGERY.

MARTIN BUEL TINKER, B.S., M.D., *Lecturer on Surgery.*

Four hours weekly, second half year, recitations, demonstrations and occasional lectures. The course is given to small sections, and is intended to familiarize the student with the principles of General Surgery and Surgical Pathology. Demonstrations and laboratory work are used whenever possible in teaching such subjects as Surgical Bacteriology including testing the effectiveness of various methods of skin disinfection, sterilization of instruments, dressings and materials; testing and using suture and ligature material; the use of anesthetics; the relative value of methods for arrest of hemorrhage, etc.; the histological changes in wound repair and the general principles of diagnosis and treatment of surgical diseases and injuries. Having in mind the present tendency of State and hospital boards to estimate a medical graduate's qualifications solely or chiefly by ability to pass written examinations, frequent written exercises are given. Recitations are adopted as the principal method of instruction with the belief that for the average student information is best assimilated and retained when acquired by personal effort. Lectures are given whenever they seem likely to be helpful in supplementing other methods of instruction.

1. Surgery.—Recitations, demonstrations or lectures. Four class exercises weekly in small sections. Dr. Tinker.

MEDICINE.

EUGENE BAKER, B.S., M.D., *Lecturer on Medicine.*

No didactic lectures are delivered, their place being taken by recitations from a standard text-book.

Recitations.—The study of medicine proper is begun with systematic recitations from *Modern Medicine*, by Salinger and Kaltiger. In these recitations the nomenclature, etiology, pathology, and symptomatology of typical cases of diseases are considered, the question of treatment not being taken up until the Junior year in New York.

1. Medicine.—Two recitations weekly. Second half-year. Required of second-year students in medicine. Dr. Baker.

OBSTETRICS.

EUGENE BAKER, B.S., M.D., *Lecturer on Obstetrics.*

Instruction in obstetrics consists mainly of recitations from a standard text-book, these recitations covering the anatomy of the internal genitalia and pelvis, ovulation, menstruation, signs of pregnancy, the physiology, mechanism, and clinical course of normal labor, and the care of mother and child during the puerperium. Whenever necessary, these recitations will be illustrated by plates, casts, and demonstrations upon the obstetric manikin, etc.

1. Obstetrics.—Two recitations weekly. Second half-year. Required of second-year students in medicine. Dr. Baker.

SCHEDULE AND SUMMARIZED STATEMENT.

In this schedule the Counts or University hours are given on the following basis: One recitation or lecture weekly for one term or half-year gives a credit of one; for laboratory work it requires two and one-half actual hours weekly for a term or half a year to secure a credit of one.

SCHEDULE OF REQUIRED COURSES.

First Year.

FIRST TERM.

<i>Subject.</i>	<i>No. of Course.</i>	<i>Hours of Credit.</i>	<i>Actual Hours per Week</i>
Anatomy	1	13	32½
Chemistry	1	6	9
Physics	1	4	4
		—	—
		23	45½

SECOND TERM.

Histology	1	8	15
Physiology	1	9	16
Qual. Chem. Anal.	8	2	6
Toxicology	81	1	
Organic Chemistry	32	2	2
		—	—
		22	39

Second Year.

FIRST TERM.

Anatomy	2	9	22½
Anatomy	4	1	2½
Pathology	40	3	8
Pharmacology	1	2	3
Pharmacology	2	3	5
Nervous System, Gross Anatomy	5	2	5
Nervous System, Histology	5	3	4½
Nervous System, Physiology	5	2	2
		—	—
		25	52½

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SECOND TERM.

<i>Subject.</i>	<i>No. of Course.</i>	<i>Hours of Credit.</i>	<i>Actual Hours per Week.</i>
Biochemistry	11	5	9
Physiology Recitations	4	1	1
Neurology	3	—	—
Anatomy	3	2	5
Bacteriology	43	6	12
Medicine	1	2	2
Surgery	1	4	4
Obstetrics	1	2	2
		—	—
		22	35

Junior Year.—For subjects, see pages 73 to 74, as given in New York City.

Senior Year.—For subjects, see pages 75, 76, as given in New York City.

SUMMARY OF REQUIRED COURSES.

FIRST YEAR.

1. Anatomy.—Laboratory work with section demonstrations and recitations, thirty-two and a half actual hours weekly. First half-year. Professor Kerr, Instructors Baldwin, Hathaway, and Schaeffer, and Demonstrator Wright.

1. Introductory Inorganic Chemistry.—Three lectures, one recitation, and five hours of laboratory work weekly. First half-year. Professor Dennis, Assistant Professor Browne, and Mr. Welsh.

1. Elementary Physics.—Four lectures, with demonstrations weekly, first half-year. Professor Nichols, Merritt, or Shearer.

1. Microscopy, Histology, and Embryology.—Second half-year. Credit, 8 University hours. Two recitations, twelve hours of laboratory work, and one or more lecture-demonstrations weekly during the second half-year. Professor Kingsbury, Instructor Hilton and Assistants.

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1. Physiology of Movement, Sensation, Circulation, and Respiration.—Credit, 8 University hours. Five three-hour periods per week. The course includes laboratory work accompanied by two or more recitations or quizzes, one or more demonstrations, and one or more lectures. Second half-year. Professor Simpson and Assistants.

8. Qualitative Analysis.—One lecture and five hours of laboratory work weekly. Second half-year till April 21st. Mr. Snowdon and Mr. Rathjen.

81. Toxicology.—One lecture and five hours of laboratory work weekly. Second half-year after April 21st. Assistant Professor Chamot and Messrs. Redfield and Pratt.

32. Elementary Organic Chemistry.—Two lectures weekly. Second half-year. Dr. Delbridge.

SECOND YEAR.

2. Anatomy.—Laboratory work with section demonstrations and recitations twenty-two and a half actual hours weekly. First half-year. Professor Kerr, Instructors Hathaway, Baldwin and Schaeffer, Demonstrator Wright.

4. Thoracic and Abdominal Viscera.—Section demonstrations two and a half hours weekly. First half-year. Dr. Hathaway.

11. Biochemistry.—Two lectures or recitations and seven actual hours of laboratory work per week. Second half-year. Assistant Professor Hunter and Assistants.

40. Pathology.—Two lectures or recitations and six hours' laboratory work each week. First term to Christmas vacation. Professor Moore and Assistant Professor Burnett and Instructor Taylor.

5. Structure, Development, and Physiology of the Nervous System and Organs of Sense.—Credit 3 or 5 hours. Second year. The gross anatomy is given during the last month of the first term. The histology and development and the physiology in the first term. Professors Simpson, Kerr, and Kingsbury.

4. Physiology, Recitations and Demonstrations.—Digestion, Absorption, Metabolism, and Exertion. One hour a week. Second half-year. In assigned sections.

3. Neurology.—One lecture weekly. Second half-year. Professor Wilder. Those who do not elect this course must take additional work in Course 8.

3. Topographical and Regional Anatomy.—Section demonstrations five hours weekly. February to June. Drs. Hathaway and Wright.

43. Bacteriology.—Two lectures and ten hours' laboratory work each week. Second half-year. Professor Moore and Instructor Taylor.

1. Pharmaceutic Practice and Prescription Writing.—In sections. Two hours' laboratory (or demonstrations) and one recitation weekly. Second year. First term. Instructor Dresbach, Dr. Wilson and Assistants.

2. Materia Medica and Pharmacodynamics.—Three hours' laboratory (or demonstration) and two recitations weekly. In sections. Second year. First term. Instructor Dresbach, Dr. Wilson and Assistants.

1. Medicine.—Two recitations weekly. Second half-year. Dr. Baker.

1. Surgery.—Recitations, demonstrations, or lectures. Four hours in small sections. Second half-year. Dr. Tinker.

1. Obstetrics.—Two recitations weekly. Second half-year. Dr. Baker.

REQUIREMENTS FOR ADMISSION.

For admission to the Medical College applicants must offer either A, B, or C as below :

A. Graduation from an approved college or scientific school.

B. Admission to the senior class in the College of Arts and Sciences, Cornell University, or in any other approved college or scientific school whose faculty will permit them to substitute the first year of a professional course for the fourth years in Arts and Science, and who will confer upon them the bachelor's degree upon the satisfactory completion of the first year of the course in the Cornell University Medical College.

C. By giving evidence by examination that they have acquired an equivalent education to the bachelor's degree and the training sufficient to enable them to profit by the instruction offered in this college.

In and after 1909 all candidates for admission to the Cornell University Medical College must have at least such knowledge of physics and inorganic chemistry as may be obtained in college by a year's course in these subjects when accompanied by laboratory work; and in and after 1910 all candidates for admission must also possess a similar knowledge of biology. See also page 22.

THE A.B. AND M.D. DEGREES.

It may be seen from the above that the two degrees, Bachelor of Arts and Doctor of Medicine, may be obtained in seven years. The first three years must be taken in the College of Arts and Sciences. The fourth year is also the first year in the medical college, and at the end of it the student receives the degree of A.B. The last three years are taken entirely in the College of Medicine.

Students in the College of Arts and Sciences in Cornell University or other approved institution, who intend to enter the medical college, are advised to determine upon their future course of study at latest by the end of their sophomore year, in order that they may meet the requirements for admission set forth above.

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Those who lack the necessary preparatory years of collegiate work, and who wish to enter the College of Arts and Sciences with the view of studying medicine later, may obtain from the Registrar of Cornell University the catalogue of that college in which the courses and requirements for admission are fully set forth.

RESIDENCE AND REGISTRATION.

The college year is nine months long, extending from the last of September till about the middle of June, and is divided into two nearly equal terms. (For exact dates, see calendar on page 88.)

No credit is given for work done in absentia. For leave of absence during the session, application should be made to the Secretary.

At the beginning of the term (September 29-30, 1908, and January 30, 1909) students must register with the University Registrar, Room 9A, Morrill Hall. After registration with the University Registrar, they must register with the Secretary of the Medical College, in Stimson Hall.

EXAMINATIONS.

Students are advanced in course from one year to the next upon passing examinations upon the work of that year. As in the College of Arts and Sciences, the work of each year is considered final of itself. There is no unnecessary repetition of subjects taught from year to year. According to the usage of the other colleges, the University student found to be markedly deficient will be dropped from the College at the end of the term in which such deficiency is shown. In the case of a student so dropped, an application for re-admission will not be entertained until after the expiration of one term.

ADVANCEMENT FROM SECOND TO THIRD YEAR.

Upon the completion of the two years in Ithaca, the student must obtain from the Faculty a statement of all the work which he has done;

CORNELL UNIVERSITY MEDICAL COLLEGE.

and accompanying this statement must be a recommendation that he be allowed to register in the New York division. As a student is not advanced from one year to another in the New York division until all the work of the year is completed, a student from Ithaca cannot enter the third-year class in New York until the entire schedule of the first two years has been successfully completed. For removing any conditions, examinations are held at the beginning of the fall term, both in Ithaca and in New York City. The student is at liberty to take these examinations in Ithaca or in New York City. The examination on a subject in either place is final for that year. That is, the student will not be permitted to try an examination on a subject in Ithaca, and take advantage of the later date for the examination in New York to have a second examination on the same subject in the same autumn.

If a student is deficient in two or more subjects there is no objection to his taking the examination in one or more subjects in Ithaca, and the remaining ones in New York, the same autumn.

MEDICAL SOCIETY.

The Cornell Medical Society is a student organization. At the meetings, papers prepared by the members are read, followed by general discussion. The aim is to give mutual aid in gaining general and special medical knowledge, facility in conducting the exercises of the meetings, and in presenting papers and discussions in a clear and forcible manner before an audience.

CHARGES FOR INSTRUCTION.

FIRST YEAR.

Matriculation	.	.	.	.	.	.	.	.	.	\$5
Tuition	.	.	.	.	.	.	.	.	.	\$150
Laboratory Fees and Deposit	.	.	.	.	.	.	.	.	.	\$56

SECOND YEAR.

Tuition	.	.	.	.	.	.	.	.	.	\$150
Laboratory Fees and Deposit	.	.	.	.	.	.	.	.	.	\$49

BOARD AND ROOMS.

The cost of living in Ithaca, including board, room, fuel, and lights, varies from \$4 to \$10 per week. By the formation of clubs, students are sometimes able to reduce their expenses to \$3.50 per week for room and board, and occasionally to even less than that amount.

The cost for board, rent of furnished room, fuel and lights, in Sage College and Sage College Cottage, which are exclusively for women, varies from \$5 to \$6.50 a week. A student occupying alone one of the best rooms pays \$6.50 a week. If two occupy such a room together, the price is \$5.75. Those occupying less desirable rooms, with two in a room, pay \$5 a week each. Both buildings are warmed by steam, lighted by electricity, and, in most cases, the sleeping apartment is separated from the study.

Letters of inquiry in regard to board and rooms at the Sage College and the Cottage should be addressed to Mr. G. F. Foote, Business Manager of Sage College, Ithaca, N. Y.

CORNELL UNIVERSITY MEDICAL COLLEGE.

MATRICULANTS IN NEW YORK CITY.

Allaben, Charles Moore.....	Margaretville, N. Y.
Anderson, Victor William.....	New York City.
Andrews, Robert Wesley, M.D.....	Poughkeepsie, N. Y.
Arnold, Edward August.....	New York City.
Axtell, Clayton Morgan.....	Barbourville, N. Y.
Baker, Davis.....	North Granville, N. J.
Baker, James Elmer.....	Brooklyn, N. Y.
Baker, Valentine Collamer.....	Ballston Spa, N. Y.
Ballance, Charles, B.S., M.D.....	Tacoma, Wash.
Ballou, Edward John.....	Gardenville, N. Y.
Baldwin, Aaron Grover.....	East Orange, N. J.
Banker, George Tilman.....	Elizabeth, N. J.
Barash, David Harry.....	New York City.
Beder, Morris.....	New York City.
Beebe, Silas Palmer, B.S., Ph.D.....	Flushing, L. I., N. Y.
Bell, Albert Mortimer.....	Glen Head, N. Y.
Berger, Edward.....	New York City.
Berkowitz, Samuel.....	Paterson, N. J.
Biram, James Harrington, B.S.....	Provincetown, Mass.
Birdsall, Winslow.....	Croton Lake, N. Y.
Bishop, Ernest Simon, A.B.....	Providence, R. I.
Blauvelt, John Hudson.....	Nyack, N. Y.
Blum, Samuel George.....	Brooklyn, N. Y.
Boehme, Gustav Frederick, B.S.....	New York City.
Bower, Jacob.....	New York City.
Breglia, John Eugene.....	New York City.
Breitman, Charles.....	Brooklyn, N. Y.
Brendler, Charles.....	New York City.
Brown, Harold William.....	Jersey City, N. J.
Budington, Harold Fairchild.....	New York City.
Burns, Edward, B.S., M.D.....	Poughkeepsie, N. Y.
Caplan, Isidor.....	Brooklyn, N. Y.
Carey, Thomas Walter, A.B.....	New York City.
Chapman, Louis Ballantine.....	Hartford, Conn.
Chappel, Halbert William, A.M.....	New York City.
Chasan, Jacob.....	Brooklyn, N. Y.
Clurman, Morris J., A.B.....	New York City.

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Coakley, Walter Aloysius.....	South Amboy, N. J.
Coffin, Ernest Linwood.....	Ashland, Me.
Cohen, Harry David.....	New York City.
Cohen, Henry Julius.....	New York City.
Cohn, Mark.....	New York City.
Conklin, Roscoe Lewis.....	New York City.
Cook, William Warrington.....	Brooklyn, N. Y.
Cooley, James Allen.....	Canandaigua, N. Y.
Cowan, John Francis, A.B.....	Los Angeles, Cal.
Crandall, Lee Saunders.....	New York City.
Crudden, Matthew James.....	New York City.
Curley, William Henry.....	Pittsfield, Mass.
Danziger, Max.....	Brooklyn, N. Y.
Davidson, Benjamin.....	Brooklyn, N. Y.
Davis, Charles Roy, A.B.....	Pine Bluff, Ark.
de la Motte, James Francis.....	New York City.
Denniston, Frank.....	New York City.
Denton, William.....	Port Jervis, N. Y.
DeWolf, Harold.....	Bristol, R. I.
Donovan, Florence Timothy, B.A.....	Port Richmond, N. Y.
Donovan, James Clement.....	Goshen, N. Y.
Dowdle, Edward.....	Oswego, N. Y.
DuBois, Leo Charles.....	Newburgh, N. Y.
DuBois, Phebe Lott.....	Freehold, N. J.
Ducat, Reginald, A.B.....	Chicago, Ill.
Durand, Albert C., A.B.....	Oberlin, Ohio.
Farkas, Morris.....	New York City.
Farnell, Frederic James.....	Providence, R. I.
Feldman, Benjamin.....	New York City.
Feldstein, Bernard.....	New York City.
Fernandez-Escarra, Antonio.....	Canaguey, Cuba.
Flagg, Paluel Joseph.....	Yonkers, N. Y.
Folkmar, Elnora Cuddeback, B.S., M.Ph., D.S.S.....	New York City.
Frank, Morris.....	Elizabeth, N. J.
Friedenreich, Irving.....	Brooklyn, N. Y.
Friedman, Jesse David.....	Brooklyn, N. Y.
Frundt, Oscar Christian.....	Jersey City, N. J.
Gaffney, Raymond James.....	New York City.
Garlick, Ralph Howard.....	South Ashburnham, Mass.

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Genovese, Serafino.....	New York City.
Gilbert, Joe, M.D.....	College Station, Texas.
Gillette, Arthur Taylor.....	Cuba, N. Y.
Ginsburg, Benjamin.....	New York City.
Goldberg, Isaac.....	New York City.
Golding, Harold Horton.....	Peekskill, N. Y.
Goldstein, William.....	Brooklyn, N. Y.
Gootenberg, David.....	New York City.
Gould, Lewis Arthur.....	Interlaken, N. Y.
Graham, John Cooper.....	Brooklyn, N. Y.
Graves, Gaylord Willis, A.B.....	Binghamton, N. Y.
Greene, Albert Dygert.....	Fort Plain, N. Y.
Green, Samuel Reuben.....	New York City.
Griswold, Alexander Viets, M.D.....	Louisville, Ky.
Grossman, Jacob.....	New York City.
Haberman, Robert.....	Bronx, New York City.
Hallstead, Walter George.....	Scranton, Pa.
Hamblet, Mary Lucia, A.B.....	Salem, Mass.
Hand, Jesse Donald.....	New York City.
Handleman, William Monroe.....	New York City.
Harris, Leon.....	Brooklyn, N. Y.
Hascall, Theodore Conrad, Ph.B.....	New York City.
Hartigan, William Edward.....	Norwich, N. Y.
Himmelstein, Urius.....	New York City.
Hirschfeld, David Bernhard.....	New York City.
Hoag, Arthur Edmond.....	Millerton, N. Y.
Hoch, George Francis.....	Newark, N. J.
Hoenig, Edward.....	New York City.
Hoffmann, Richard.....	New York City.
Holton, Walter Bonnell.....	Montclair, N. J.
Hopkins, Richard Thomas.....	Flushing, N. Y.
Horn, Stanley Granger, A.B.....	Brooklyn, N. Y.
Hug, Walter.....	Highwood Park, N. J.
Hydrofsky, Charles Israel.....	Brooklyn, N. Y.
Itskovitz, John Henry.....	New York City.
Jablons, Benjamin.....	New York City.
Jacobowitz, Adolph.....	New York City.
Jagle, Elizabeth Carlisle, M.D.....	New York City.
Jokichi, Oguri.....	Handa-Owari, Japan.

Joseph, David.....	New York City.
Justin, Arthur William.....	Union Hill, N. J.
Kahn, Max.....	New York City.
Kahn, Morris Hirsch.....	New York City.
Kanouse, George Edward.....	Hackettstown, N. J.
Kenney, John Stanley.....	Newark, N. J.
Korowitz, Louis.....	New York City.
Krellenstein, Irving Bernhard.....	New York City.
Kretz, Clarence Edgar.....	New York City.
Krugler, Wallace.....	Jersey City, N. J.
Kutil, Henry Robert, B.S.....	New York City.
Lampert, Milton Albert.....	Brooklyn, N. Y.
Lance, Ruth Mitchell.....	Kingston, Pa.
Langrock, Edwin George.....	New York City.
Levy, Albert Lewis.....	New York City.
Levy, Saul.....	New York City.
Lichtenstein, Perry Maurice.....	New York City.
Liebling, Philip.....	New York City.
Liefeld, Walter Link.....	Brooklyn, N. Y.
Linder, Samuel.....	Brooklyn, N. Y.
Liebert, Mark.....	New York City.
Lozynski, Walter William.....	Long Island City, N. Y.
Luke, Harry Cliff, Ph.G.....	Salamanca, N. Y.
Luftig, Jacob.....	New York City.
Lutz, Charles, Jr., Ph.G.....	New York City.
Lynch, George Michael.....	Andover, N. Y.
McCombs, Carl Esselstyne, A.B.....	Frankfort, N. Y.
McCormick, James Edward.....	Newark, N. J.
McCorken, John Joseph.....	New York City.
McGrath, John Francis.....	Holyoke, Mass.
MacIntyre, Harry.....	New York City.
McNeill, Walter Harold, Jr.....	Mt. Vernon, N. Y.
Mahler, Edward.....	Paterson, N. J.
Mangiery, Joseph Michael.....	Brooklyn, N. Y.
Marriott, Williams McKim, B.S.....	New York City.
Marcus, Harry.....	New York City.
Marschark, Max.....	New York City.
Marsh, Edward Harvey.....	Brooklyn, N. Y.
Martin, Arthur Chalmers.....	Rockville Centre, N. Y.

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Matz, George.....	New York City.
Meltzer, John Solomon.....	Bridgeport, Conn.
Mitchell, James Reed, Jr., A.B.....	New Orleans, La.
Moench, Gerhard Ludwig.....	New York City.
Moorman, Silas Mercer, A.B.....	Georgetown, Ky.
Mosher, George.....	New York City.
Mott, Albert George.....	Mt. Vernon, N. Y.
Mueller, Carl Helmuth.....	Brooklyn, N. Y.
Murray, Morrison Foster.....	Brooklyn, N. Y.
Norman, Max.....	New York City.
Neustadt, Benjamin.....	New York City.
Newman, Abraham Jacob.....	Tarrytown, N. Y.
Newman, Leander Allison.....	Penn Yan, N. Y.
Nicholson, Arthur Orsmy, A.B.....	New York City.
O'Brien, Paul.....	Pittsburg, Pa.
Olitsky, Peter Kosciusko.....	New York City.
O'Mara, William Aloysius.....	Jersey City, N. J.
O'Neill, Charles Leo, A.B.....	Newark, N. J.
Orth, Rudolph Daniel.....	Blauvelt, N. Y.
Pabst, Charles Frederick.....	New York City.
Parnass, Samuel.....	Brooklyn, N. Y.
Patterson, William Maxwell.....	New York City.
Perlberg, Harry James.....	Jersey City, N. J.
Phillips, Edgar Warden.....	Bath, N. Y.
Pierson, Farrand Baker, A.B.....	Brooklyn, N. Y.
Polon, Albert.....	New York City.
Rabinowitz, Harold Max.....	Brooklyn, N. Y.
Read, Clarence Arthur.....	Pittsfield, Mass.
Redding, Charles Joseph Vincent.....	Owego, N. Y.
Reid, John Joseph, Jr.....	New York City.
Rein, Leopold, B.A., Ph.G., Ph.C.....	Brooklyn, N. Y.
Roberto, Romeo.....	New York City.
Rockman, Jacob.....	Brooklyn, N. Y.
Rohn, John Philip, Jr.....	Newark, N. J.
Romansky, Benjamin, M.D.....	New York City.
Rubinowitz, Alexander Hyman.....	Brooklyn, N. Y.
Ruch, Louis, B.C.S.....	Englewood, N. J.
Rulison, Elbert Theodore, Jr., B.S.....	Schenectady, N. Y.
St. Lawrence, William Patrick.....	Paterson, N. J.

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Sachs, Jacob.....	Brooklyn, N. Y.
Santee, Harold E., A.B.....	Hornellsville, N. Y.
Schaefer, Ernest Ludwig.....	Brooklyn, N. Y.
Schechter, Julius.....	New York City.
Schlegman, Saul.....	New York City.
Schneider, Herman.....	Rockville, Conn.
Schwarz, Herman, M.D.....	New York City.
Schwartz, Leo Samson, Ph.G.....	New York City.
Schorr, Herman Emanuel.....	New York City.
Schultz, Max.....	New York City.
Schulz, Julius George, A.B.....	Mt. Vernon, N. Y.
Schwallie, Albert Eugene, Ph.G.....	Brooklyn, N. Y.
Schwartz, Jesse David, B.S.....	Clifton, N. Y.
Senigaglia, Giacomo Abraham.....	Nyack, N. Y.
Sherman, Henry Louis.....	New York City.
Sherman, Morris Mortimer.....	New York City.
Siegel, David.....	New York City.
Silverman, Samuel.....	Brooklyn, N. Y.
Simpson, Reuben Spencer.....	Oswego, N. Y.
Smith, B. F., M.D.....	Denton, Texas.
Smith, Esmonde Bathgate.....	Brooklyn, N. Y.
Smith, Malcolm Kinmouth.....	Morristown, N. J.
Solomon, Meyer.....	New York City.
Somerville, William Andrew, Jr.....	New York City.
Spaulding, Harry Vanness.....	New York City.
Squire, Frederick Duane.....	Stony Brook, N. Y.
Stark, Jesse B.....	Brooklyn, N. Y.
Steinberg, James.....	New York City.
Steinbugler, William Francis.....	New York City.
Stilson, George Doremus.....	Buffalo, N. Y.
Stout, John Phillips.....	Bayonne, N. J.
Straub, Herbert.....	Long Island, N. Y.
Streen, Morris.....	Newark, N. J.
Stuart, Walter, M.D.....	Westfield, N. J.
Swezey, Sarah Ellis.....	Bayside, N. Y.
Taylor, Horace Rowe.....	Keeseville, N. Y.
Tedesco, Guglielmo, M.D.....	New York City.
Tierney, John Dennis.....	New York City.
Tomkins, William.....	Brooklyn, N. Y.

CORNELL UNIVERSITY MEDICAL COLLEGE.

Tran, Irving.....	New York City.
Vallely, Joseph James.....	New York City.
Van Kleeck, Louis Ashley.....	Ithaca, N. Y.
Van Marter, James Howard.....	Newfield, N. Y.
Walker, William Joseph, A.B.....	New York City.
Walker, William Joseph, A.B.....	Newport, R. I.
Walzer, Abraham.....	Brooklyn, N. Y.
Wallach, Joseph Irving.....	New York City.
Ware, John Sayers.....	Stapleton, N. Y.
Weber, Salo Nordemann, A.B.....	New York City.
Weiss, Samuel.....	New York City.
White, Charles Carroll.....	Utica, N. Y.
Wildman, Arthur.....	Brooklyn, N. Y.
Willard, Luvia Margaret.....	East Angus, Canada.
Williams, Rodney Ralph.....	Fredonia, N. Y.
Wolf, Charles.....	New York City.
Wolff, Solon Charles.....	New York City.
Wood, Thomas Brenner.....	Jamaica, N. Y.
Workman, Isaac.....	New York City.
Wynkoop, Roy Baldwin.....	Chemung, N. Y.
Yates, David William, M.D.....	New York City.
Yum, William.....	New York City.
Zingher, Abraham.....	New York City.
Zuckerman, Jerome.....	New York City.

MATRICULANTS AT ITHACA.

Adler, Isidor.....	Buffalo, N. Y.
Alpert, Nathaniel.....	Ithaca, N. Y.
Andrews, Benjamin Clark.....	South Kortright, N. Y.
Auerbach, Louise.....	Havre, Mon.
Bates, Alfred K.....	Ithaca, N. Y.
Bates, Miss Grace E.....	New York, N. Y.
Betts, Benjamin Harrison.....	Tonawanda, N. Y.
Borst, Roscoe C.....	Seward, N. Y.
Brundage, Walter H.....	Pleasantville Station, N. Y.
Bruyn, Elizabeth Armitage.....	Brooklyn, N. Y.
Bryant, Janette Staples.....	Binghamton, N. Y.
Bull, Harry G.....	Keeseville, N. Y.
Carmer, John Chester.....	Lyons, N. Y.
Darvas, Margaret.....	New York City.
Dean, Elvira Dudley.....	Ithaca, N. Y.
Dean, Jennie.....	Ithaca, N. Y.
Dickson, George B.....	Edgewood Park, Pa.
Dudley, Helen.....	Brooklyn, N. Y.
Eddy, Nathan Brown.....	Glens Falls, N. Y.
Franklin, Albert Virgil.....	Ithaca, N. Y.
Frizzell, Rex Russell.....	Ithaca, N. Y.
Gewertz, Maurice.....	Brooklyn, N. Y.
Gibson, Edwin Fred.....	Norwich, N. Y.
Glanville, William Earl.....	Auburn, N. Y.
Gleason, James P.....	Lyons, N. Y.
Hall, Harold Louis.....	Saratoga Springs, N. Y.
Hoag, William Harvey.....	Millerton, N. Y.
de Jesus, Francisco R.....	Camuy, Porto Rico.
Howell, William L.....	Leroy, N. Y.
Kelley, John Francis.....	Scranton, Pa.
Landes, Pauline Newell.....	Curityba, Parana, Brazil.
Lattin, Burton.....	Walden, N. Y.

CORNELL UNIVERSITY MEDICAL COLLEGE.

Lee, William Forrest.....	Rochester, N. Y.
Loeber, Maud.....	New Orleans, La.
Lounsberry, Lee Tucker.....	Lounsberry, N. Y.
Lundell, Nils O.....	Poughkeepsie, N. Y.
McCormick, Francis J.....	Ithaca, N. Y.
Mackey, Clarence H.....	Lancaster, N. Y.
Martin, Mabel Agnes.....	Binghamton, N. Y.
Mattick, Walter L.....	Buffalo, N. Y.
Mead, Theodore F.....	Morrisville, N. Y.
Mellen, Stanley H.....	Catskill-on-Hudson, N. Y.
Neal, Josephine Bicknell.....	Lewiston, Maine.
Pawling, Jesse Randolph.....	Watertown, N. Y.
Perpente, Anna E.....	Jamaica, N. Y.
Place, Benoni Austin.....	Ithaca, N. Y.
Pulsifer, Nathan.....	Auburn, Me.
Richens L. Belle.....	Auburn, N. Y.
Robertson, Ransom Smith.....	Jamestown, N. Y.
Roohan, James Francis.....	Saratoga Springs, N. Y.
Sacco, Anthony G.....	Long Branch, N. J.
Schrock, Robert D.....	Decatur, Ind.
Scudder, Charles F.....	Northport, L. I.
Shookhoff, Charles.....	Brooklyn, N. Y.
Shostac, Frances.....	New York, N. Y.
Smith, Sidney D.....	Rodman, N. Y.
Staples, Charles W.....	Franklin, N. H.
Sweet, Earl Vincent.....	Phoenix, N. Y.
Tong, John Waugh.....	Elmira, N. Y.
Vavasour, James Francis.....	Dalton, Mass.
Washburn, Raymond Secord.....	Alpine, N. Y.
Wearne, Raymond Groves.....	Binghamton, N. Y.
Webb, Mary Elizabeth.....	Portland, Ore.
White, Sarah Parker.....	Watervliet, N. Y.
Wilson, May G.....	Bensonhurst, L. I.

HOSPITAL APPOINTMENTS.

CLASS OF 1907.

Presbyterian Hospital.

Robert Edward Gaby, A.B. (first place),
Edward M. Welles, Jr., A.B.,
George N. Pease, A.B.

New York Hospital.

George Whiting Wheeler (first place),
Cary Eggleston,
Lucius A. Wing, B.Sc.

N. Y. Post-Graduate Hospital.

William T. Godfrey (first place),
Stewart A. Welch, A.B.,
William H. Sheldon.

Hudson Street Hospital.

Thomas F. Laurie.

Methodist Episcopal Hospital, Brooklyn, N. Y.

Frank Harnden,
Frank C. Keil.

St. Francis Hospital.

Gustav A. Rueck.

Mount Sinai.

Isador Shapero (externe).

City Hospital.

Frederick Sutton.

Kings County Hospital.

George T. Longbothum,
Edward M. Wellbery.

Brooklyn German Hospital.

Henry E. B. Meyer.

Bellevue Hospital.

(Second Division.)

George M. Gelser, A.B. (first place),
Thomas R. Pooley, Jr.,
Walter E. Lowthian,
Anthony C. Zehnder,
John R. Bradley,
Walter Hess.

(Fourth Division.)

Henry C. Barkhorn,
Thomas MacRae,
William C. Thro, B.S.A., A.M.

St. Luke's Hospital.

Royale H. Fowler.

St. Vincent's Hospital.

Francis W. Baldwin.

Fordham Hospital.

Henry Eichel.

Lincoln Hospital.

Ernest E. Keet (first place),
Benjamin W. Seaman,
William M. Sill,
Brayton Earl Failing,
Thomas E. Waldie.

Beth Israel Hospital.

Benjamin Schwartz,
Simon David Ehrlich,
Harry Cohen,
Solomon Horwitt.

CORNELL UNIVERSITY MEDICAL COLLEGE.

Brooklyn City Hospital.

George Hollis Palmer.

St. Catherine's Hospital, Brooklyn, N. Y.

Daniel R. Reilly.

Washington Heights Hospital.

Alexander Block.

Sydenham Hospital.

Nathan Israel Slutsky.

Workhouse and Almshouse Hospital.

Maurice Kemp.

Brooklyn Jewish Hospital.

Joshua Ronsheim,

Meyer A. Rabinowitz.

Newark City Hospital.

Frank A. M. Bryant (first place),
Blakeley R. Webster.

Boston City Hospital.

Arthur C. Martin.

Newport Hospital.

Joseph Engel.

White Plains Hospital.

Lemuel L. Joshi, B.Sc.

Williamsburgh Hospital.

Mary Merritt Crawford, A.B.

Worcester Memorial Hospital.

Lucy C. Reed, A.B.,

Esther E. Parker, A.B.

*Bushwick Hospital, Brooklyn,
N. Y.*

Max Lehman.

Lebanon Hospital.

Jerome Wagner Sonnenberg.

St. Gregory's Hospital.

Henry Kresky,

Louis Duke.

*S. R. Smith Infirmary, Staten
Island.*

David Wilson,

Edward J. Eckel.

Montefiore Home.

Henry Weinstein.

Christ Hospital, Newark, N. J.

Samuel A. Cosgrove.

Rochester City Hospital.

Howard L. Prince.

Eastern Maine General Hospital.

Edward R. Mansfield, B.S.

Flushing Hospital.

George Manulkin.

*New York Infirmary for Women
and Children.*

Ebba E. Almgren,

Belle Thomas.

Watertown City Hospital.

Eva C. Reid.

*New England Hospital for
Women and Children.*

Florence L. McKay, A.B.

CORNELL UNIVERSITY MEDICAL COLLEGE.

The percentage obtained in each class since the opening of the College is as follows:

1899.....	42 per cent.	1903.....	78 per cent.
1900.....	58 per cent.	1904.....	59 per cent.
1901.....	61 per cent.	1905.....	85 per cent.
1902.....	71 per cent.	1906.....	65 per cent.
	1907.....		95 per cent.

COLLEGE BUILDING.

The Medical School and a Dispensary, each with a main entrance on First Avenue, are arranged as follows:

The basement is commodious, well lighted, and ventilated, and contains the engines, boilers, dynamos and ventilating machinery; the refrigerating and cold-storage plant, with the injecting and freezing rooms; a large room with lockers, and another for bicycles. Store-rooms, including one for drugs; four rooms, including a small theatre and a workshop, for orthopædic surgery; toilet rooms and lavatories, and several rooms for the janitor of the building, are also found here. On the basement level, but outside of the building, is a large incinerating furnace for consuming all the refuse from the College.

The principal entrances to the building are on the *First Floor*. They open from First Avenue into vestibules, one leading to the main hall of the school, the other to the general waiting room of the dispensary, between which the large amphitheatre is situated.

The rooms of the Children's Department, which include an isolating room and a small theatre, are placed between the entrances, while around the waiting room of the dispensary are located the office for distributing patients, the pharmacy rooms for the departments of surgery and medicine, waiting and dressing rooms, lavatories, and rooms for the Roentgen-ray and sterilizing apparatus.

Grouped around the main hall of the school on this floor are the council and faculty room, the office of the Dean, the secretary, and the clerk, reading and recitation rooms.

Upon the *Second Floor*, the same general arrangement prevails. On the side of the dispensary there is a large waiting room, surrounded by rooms assigned respectively to the departments of genito-urinary diseases, diseases of the nervous system, of the skin, and of the ear, while covering the space at the middle front of the building are the rooms belonging to the departments of the eye and the throat, with a series of twenty dark stalls for the simultaneous examination of as many patients by as many students. Small waiting and dressing rooms and lavatories for the convenience of the patients are also found on

this floor. The upper part of the large amphitheatre, extending from the floor below, occupies the centre of the rear half of this floor. The remainder of the floor is given up to the school. Here is found a hall, around which are grouped recitation rooms and laboratories for clinical pathology. These laboratories have convenient access from the dispensary, permitting ready coöperation in the work carried on there.

The *Third Floor* of the building is given up to teaching space, excepting an area upon the "dispensary side" of the building, which is assigned to the departments of gynæcology and obstetrics. This comprises a small theatre, examining, waiting, dressing, and toilet rooms, manikin, and two recitation rooms. The remainder of this floor is occupied by two amphitheatres (each having a seating capacity of about 175 students); one for anatomy, physiology, and pathology, the other for chemistry; attached to each are preparation and research rooms. The chemical laboratories also occupy this floor, including the main laboratory, the laboratory for physiological chemistry, rooms for apparatus, etc., and a library of chemistry.

There is the usual hall and corridor space with toilet rooms and lavatories.

The *Fourth Floor* is occupied by the upper part of the two amphitheatres which project from the floor below. The department of pathology and bacteriology occupies the remainder of this floor. Ample facilities are provided, not only for the class work and demonstrations, but for special and advanced courses and investigations. A library of pathology and bacteriology is situated here.

The *Fifth Floor* is devoted to the department of practical anatomy. The main dissecting room occupies a space of 160 by 55 feet; there is also a large room, 40 by 50 feet, which is set apart for advanced undergraduates and post-graduates. These rooms can be cooled by the refrigerating plant in such a manner as to permit the pursuit of practical anatomy with as much comfort in summer as in winter.

This floor presents such facilities as lockers for 300 students, a small demonstration theatre with prosecting and cold-storage room attached, private dissecting rooms, a bone room, a library, a reading and study room, and a commodious room for instruction in operative surgery.

The department of photography, the animal house, and a room for the preparation of bones are placed in a half-story at the top and rear of the building.

There are two main staircases, one for each department of the building, passenger elevators, and a freight lift.

The building itself is fireproof throughout, being constructed of steel, stone, brick, marble, and tile. The glazed brick and glazed tile walls, tile floors, and enamel painted cast-iron trim to the doors and interior of the windows insure cleanliness. Special attention has also been paid to the problems of refrigeration, lighting, heating, and ventilation, so that every part of the structure can be easily kept at all times in an agreeable and sanitary condition.

In conjunction with this building the Loomis Laboratory will be employed in the manner already set forth.

CORNELL MEDICAL ALUMNI SOCIETY.

AIMS.

"ARTICLE II. The aims of this Society shall be as follows:—(1) To further the interests of the Medical College and the interests of the University at large. (2) To further the interests, educational, professional and social, of the graduates of the Medical College. (3) To promote good fellowship among the graduates, and between the graduates and undergraduates of the Medical College."

MEMBERSHIP.

"ARTICLE III., Section 1. All graduates of the Cornell University Medical College shall be considered members of this Society upon the payment of one dollar."

"ARTICLE III., Section 2. There shall be an annual fee of one dollar, to be paid on or before the date of the annual business meeting."

OFFICERS.

"ARTICLE IV., Section 1. The officers of this Society shall consist of a President, Vice-President, Secretary, and Treasurer. They shall be residents of New York City or vicinity during their term of office."

"Section 2. The term of office shall be one year."

COMMITTEES.

"ARTICLE V., Sections 1 and 3. The officers of this Society, and six additional members elected at the annual meeting, shall constitute the Executive Committee. This Committee shall receive reports from all

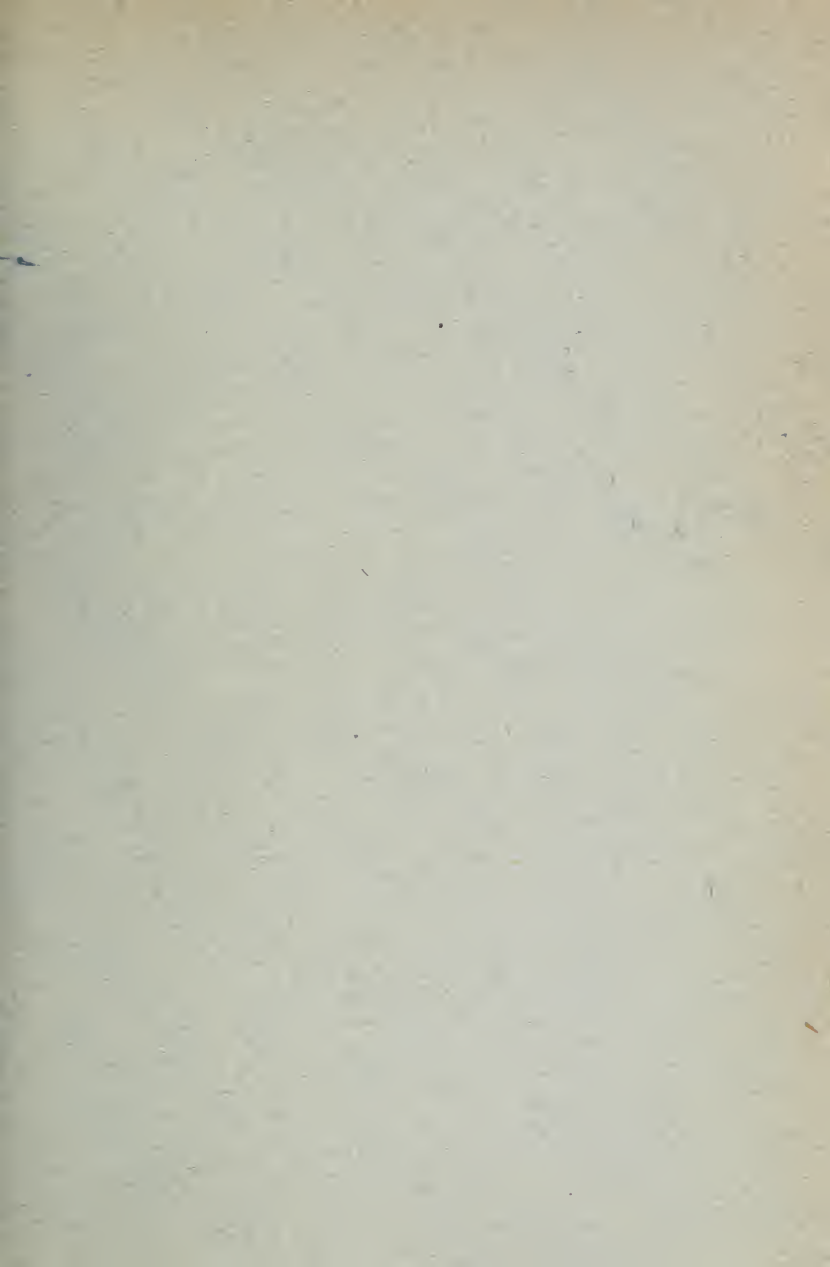
other Committees, and shall initiate and supervise plans for fulfilling the purposes of this Society. The President shall act as chairman *ex-officio*."

MEETINGS.

"ARTICLE VI., Section 1. There shall be an annual meeting for the election of officers and the transaction of other business, to be held at the College Building during December, the date to be appointed by the Executive Committee."

"Section 2. There shall be at least one social meeting a year, held during the fall term, to which the Faculty, graduates and undergraduates may be invited."

Address all communications to the
SECRETARY OF ALUMNI SOCIETY,
Cornell University Medical College,
First Ave. and 28th St.



CORNELL UNIVERSITY

COMPRISES THE FOLLOWING DEPARTMENTS:

The GRADUATE DEPARTMENT (Degrees A. M., Ph. D., etc.)

The COLLEGE OF ARTS AND SCIENCES (Degree A. B.)

The COLLEGE OF LAW (Degree LL. B.)

The MEDICAL COLLEGE* (Degree M. D.)

The NEW YORK STATE VETERINARY COLLEGE (Degree D. V. M.)

The COLLEGE OF AGRICULTURE (Degree B. S. A.)

The COLLEGE OF ARCHITECTURE (Degree B. Arch.)

The COLLEGE OF CIVIL ENGINEERING (Degree C. E.)

The SIBLEY COLLEGE OF MECHANICAL ENGINEERING AND MECHANIC
ARTS (Degree M. E.)

For copies of the University Register and for additional information, apply to

REGISTRAR, CORNELL UNIVERSITY,

Ithaca, N. Y.

* The full four-year course of the CORNELL UNIVERSITY MEDICAL COLLEGE is given in the City of New York; the work of the first and second years is also given at Ithaca, where it may be taken by men students and where it must be taken by women students. Both men and women students take the last two years of the course in New York City. Special announcements of the Medical College and information of every kind regarding it will be furnished on application to

SECRETARY, Cornell University Medical College,
First Avenue and 28th Street, New York City.

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**CORNELL UNIVERSITY
MEDICAL COLLEGE**

**ANNOUNCEMENT
1909-1910**

NEW YORK CITY
PUBLISHED BY THE UNIVERSITY



CORNELL UNIVERSITY MEDICAL COLLEGE

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ANNOUNCEMENT
1909-1910

NEW YORK CITY
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Long

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CALENDAR.

1909.

Sept. 20, Monday—Examinations begin for admission to the first year of all departments of the University.

Sept. 27, Monday—Examinations begin for conditioned students and for those applying for advanced standing in the medical department.

Sept. 29, Wednesday—College opens.

Nov. 2, Tuesday—Election day. Legal holiday.

Nov. 25, Thursday—Thanksgiving recess begins.

Nov. 29, Monday, 9 A.M.—Thanksgiving recess ends.

Dec. 22, Wednesday—Christmas recess begins.

1910.

Jan. 3, Monday, 9 A.M.—Christmas recess ends.

Jan. 3, Monday	} Mid-winter Examinations.
Jan. 4, Tuesday	

Feb. 22, Tuesday—Legal holiday.

Mch. 25, Friday—Easter recess begins.

Mch. 28, Monday, 9 A.M.—Easter recess ends.

May 30, Monday—Examinations begin.

June 15, Wednesday—Commencement.

All students must be registered at the secretary's office at the opening of the season. No student will be admitted after October 9th without special permission of the faculty. Immediately after registration the fees must be paid at the treasurer's office.

Men may take the first two years in either New York or Ithaca. Women must take the first two years at Ithaca. All students take the last two years in New York.

BOARD OF TRUSTEES.

The PRESIDENT of the University . . .	} <i>Ex-Officio.</i>	Ithaca.
The GOVERNOR of New York State . . .		Albany.
The LIEUTENANT-GOVERNOR of N. Y. State		Albany
The SPEAKER of the Assembly . . .		Albany.
The STATE COMMISSIONER of Education .		Albany.
The COMMISSIONER of Agriculture . . .		Albany.
The PRESIDENT of the State Agricultural Soc.		Albany.
The LIBRARIAN of the Cornell Library .		Ithaca.
CHARLES EZRA CORNELL, A.B., LL.B. . . .		Ithaca.
*WALTER CRAIG KERR, B.M.E. . . . (B.)		New York.
*C. SIDNEY SHEPARD, A.B., LL.B. . . . (B.)		New Haven.
*HIRAM W. SIBLEY, Ph.D., LL.B. . . . (B.)		Rochester.
*RUTH PUTNAM, B.Lit. (A.)		New York.
*HENRY WOODWARD SACKETT, A.B. . . . (A.)		New York.
*STEWART L. WOODFORD, LL.D. . . . (B.)		New York.
_____, ... (B.)		_____
JOHN HENRY BARR, M.M.E. (A.)		Syracuse.
HENRY RUBENS ICKELHEIMER, B.L. . . . (B.)		New York.
ROBERT TUTTLE MORRIS, M.D. (A.)		New York.
HENRY B. LORD (B.)		Ithaca.
ANDREW D. WHITE, LL.D., L.H.D., D.C.L. (B.)		Ithaca.
ANDREW CARNEGIE, LL.D. (B.) ¹		Pittsburg, Pa.
GEORGE C. BOLDT (B.)		New York.
CHARLES H. BLOOD, Ph.B., LL.B. . . . (A.) ²		Ithaca.
FRANK H. HISCOCK, A.B. (B.)		Syracuse.
JAMES HARVEY EDWARDS, C.E. (A.)		Passaic, N. J.
_____, ... (B.)		_____
JARED T. NEWMAN (B.)		Ithaca.
_____, ... (B.)		_____
CHARLES E. TREMAN, B.L. (A.)		Ithaca.
ROBERT H. TREMAN, B.M.E. (B.)		Ithaca.
WILLIAM H. FRENCH (A.)		Chicago.

*Term of office (5 years) expires in 1909, the next group of six in 1910, etc., etc., (1) B., elected by Board. (2) A., elected by Alumni. (3) G., elected by the New York State Grange for 1909-1910.

BOARD OF TRUSTEES.

MYNDERSE VAN CLEEF, B.S.	. . . (B.)	Ithaca.
EMERSON McMILLIN	. . . (B.)	New York.
HENRY HERMAN WESTINGHOUSE	. . . (B.)	New York.
— — — — —	. . . (B.)	— — — — —
ROGER B. WILLIAMS, A.M.	. . . (B.)	Ithaca.
HARRY L. TAYLOR, A.B., LL.B.	. . .	Buffalo.
ALBERT H. SEWELL, B.S.	. . . (A.)	Walton.
WILLIAM F. PRATT	. . . (G.) ^s	Batavia.
EMMONS L. WILLIAMS	. . .	<i>Secretary-Treasurer.</i>
CHARLES D. BOSTWICK, A.B., LL.B.	. . .	<i>Assistant Sec.-Treas.</i>

MEDICAL COLLEGE COUNCIL.

At the foundation of the Medical College the following resolution establishing a Medical College Council and determining its functions was adopted by the Board of Trustees of Cornell University:

Resolved, That for the purpose of making recommendations to the Board of Trustees or the Executive Committee in relation to the business management of the Medical College there be established, and there is hereby established, a Medical College Council which shall consist of seven members, to wit: the President of the University (who shall be *ex-officio* chairman), the Director of the Medical College, and three trustees to be elected by the Board of Trustees or the Executive Committee who shall be appointed, one for one year, one for two years, and one for three years, and their successors to be appointed for three years, and two members of the Faculty, to be elected by the Faculty, who shall be appointed, one for one year, and one for two years, and their successors to be appointed for two years, and that all appointments to fill vacancies be made for unexpired terms.

The Council at present consists of the following members:

JACOB GOULD SCHURMAN, President of the University and
Chairman *ex-officio* of the Council.

WILLIAM M. POLK, Director of the Medical College.

H. W. SACKETT,
H. R. ICKELHEIMER, } of the Board of Trustees.
H. H. WESTINGHOUSE, }

L. A. STIMSON, } of the Faculty.
R. A. WITTHAUS, }

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THE LOOMIS LABORATORY

GENERAL STATEMENT.

The Medical Department of Cornell University was established in 1898. This undertaking, which had been contemplated by the Trustees for several years, was made possible by the gift to the University of a commodious and fully equipped building designed for medical instruction, and by the bestowal of funds for the generous maintenance of a large and vigorous school for higher education in medicine.

The Main College Building comprises a Medical School and Dispensary, with principal entrance on First Avenue, opposite Bellevue Hospital, and occupies the entire block between Twenty-seventh and Twenty-eighth Streets on First Avenue, extending back 100 feet, thus affording an available space of nearly 20,000 feet on each floor. The building is designed in a severe style of Renaissance architecture, and is constructed of Indiana limestone and red brick.

The Loomis Laboratory (founded 1886 by the same munificent hand) serves the purpose of undergraduate instruction, in connection with the laboratories in the College building. It has also been reorganized as a research laboratory, and special departments have been established in bacteriology, physiological chemistry, experimental medicine, and pharmacology. Facilities are thus furnished to graduates in medicine who may desire to pursue further study or original research in the various departments of laboratory investigation.

The Metropolitan Street Railway cars on Twenty-eighth and Twenty-ninth Streets and First Avenue connect with all the other lines of the company. A convenient station of the Manhattan Elevated Railroad is also at Twenty-eighth Street and Third Avenue. A station of the Subway is at Twenty-eighth Street and Fourth Avenue.

CLINICAL FACILITIES.

The College Dispensary.—One-half of the College Building is allotted to the Dispensary, in which ample provision has been made for the accommodation of the various clinical departments, of which there are thirteen, viz.: General Surgery, General Medicine, includ-

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ing the Diseases of the Heart and Lungs, Gynæcology, Diseases of Children, of the Nervous System, of the Genito-Urinary System, of the Skin, Eye, Ear, Nose and Throat, Orthopædic Surgery, Radiography, and Psychopathology.

Each department has been furnished with all the instruments and apparatus necessary for the examination and treatment of patients. A number of small amphitheatres are placed in the Dispensary, so that the clinical instruction provided by the curriculum can be carried on without interfering with the treatment of patients.

The attendance in the Dispensary averages about 500 patients daily, so that the clinical material is abundant and accessible.

Members of the Faculty of Cornell Medical College hold appointments in the hospitals and dispensaries of the city, and are thus enabled to utilize for teaching purposes a great quantity and variety of clinical material. The most important and best of these hospitals are the Bellevue, New York, Presbyterian, German, St. Vincent's, Gouverneur, Hudson Street, Willard Parker and Reception Hospitals, and the New York Eye and Ear Infirmary. Others are utilized from time to time, as necessity or opportunity arises. The major part of the bedside and clinical instruction is, however, conducted in Bellevue Hospital, which is directly opposite the College.

This hospital has 900 beds and receives 24,000 patients annually. It contains an amphitheatre capable of seating 300 students, and also a number of small operating theatres, where section demonstrations in surgery and gynæcology are made before the class. Connected with the hospital is a hydropathic establishment, where students are shown the practical applications of baths, douches, massage, etc.

The following clinics are held during the session:

Gynæcology—Monday, 3 P.M.

Professor POLK.

Medicine—Tuesday and Friday, 3 P.M.

Professors THOMPSON, NAMMACK, COLEMAN and others.

Surgery—Wednesday and Thursday, 3 P.M.

Professors STIMSON, WOOLSEY and HARTWELL.

Genito-Urinary—Wednesday, 3 P.M., for the latter half of the term.

Professor ALEXANDER.

Nervous Diseases—Friday, 4 P.M.

Professor DANA.

REQUIREMENTS FOR ADMISSION.

The Faculty of the Cornell University Medical College after mature deliberation concluded in 1907 that the usual "high school" education so commonly accepted as sufficient preparation for the study of medicine is inadequate. They are of the opinion that candidates for admission to this profession should possess the liberal culture and general education implied by a college degree in Arts or Science. Furthermore the great advances of recent years in all the natural sciences have led to correspondingly great advances in the practice of medicine and surgery. As a result the present four-year course in medicine has become so seriously overcrowded, that, if the teaching of medicine and surgery is to keep pace with the advance in knowledge, the curriculum must be at once revised and extended. Too large a proportion of time is given up to fundamental and non-professional instruction in chemistry, physics, biology and other kindred subjects upon which the knowledge of disease is founded, and too small a proportion to the specialized information which is imperative in the education of a properly equipped physician. The period of four years is deemed sufficient at present if devoted entirely to strictly medical subjects; otherwise it is not. Without attempting to enter into a discussion involving the advantages of a strictly scientific or so-called academic course in arts, philosophy and literature the President and Trustees of Cornell University decided to adopt the requirements advised by the Faculty of the Medical College for admission to the course leading to the degree of M.D. Therefore, only the following classes of candidates will be admitted to the Cornell University Medical College:

I. Graduates of approved colleges or scientific schools; or

II. Seniors in good standing in approved colleges or scientific schools upon condition that their faculty will permit them to substitute the first year in the Cornell University Medical College for the fourth year of their college course, and will confer upon them the bachelor's degree upon the satisfactory completion of the year's work; or

III. Persons who give evidence by examinations that they have acquired an equivalent education to that signified by a bachelor's

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degree, and training sufficient to enable them to profit by the instruction offered in the Medical College.

All candidates for admission to the Cornell University Medical College must have at least such knowledge of physics, inorganic chemistry and biology as may be obtained in college by a year's work in these subjects as indicated below.

Physics.—The candidate should have satisfactorily completed a year's work in Physics, comprising at least 90 hours of demonstration and class work, and also work in physical measurement consisting of at least 90 actual hours in the Laboratory.

Chemistry.—The candidate should have satisfactorily completed a year's work in Chemistry covering introductory inorganic chemistry, and the elements of qualitative and quantitative analysis. The inorganic chemistry should include at least 50 hours of class work, consisting either of recitations alone, or of recitations and experimental lectures, and not less than 80 actual hours of Laboratory practice. The course in qualitative analysis should comprise 20 hours of class work and about 90 actual hours of Laboratory work. It should include the detection of the more common acids and bases, and also the analysis of solid mixtures of a composition unknown to the student. The instruction in quantitative analysis should comprise 10 hours of class work and about 50 actual hours of Laboratory practice, and should include both volumetric and gravimetric determinations.

Biology.—The candidate should have satisfactorily completed a year's work in Biology (or Botany and Zoölogy) comprising at least 90 hours of demonstration and class work, and at least 125 actual hours of Laboratory work. It is recommended that the zoölogical part of the work should include some instruction in Embryology.

Physics, inorganic chemistry and the general subject of Biology occupy so important a relationship to the study of medicine that the Faculty urge as much time as possible in the preliminary education be devoted to them.

The Trustees felt that it was unfair to refuse the exceptional student of unusual abilities who has obtained independently an education equivalent to that implied by a degree from a college or scientific school, and there will therefore be examiners appointed from the faculties of the different colleges in the University to

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determine the qualifications of such as may apply for admission under Rule III. of these requirements.

The committee in charge of the administration of this rule consists of the President of the University and the Deans of the Faculties of Arts and Sciences and of Medicine.

All applications and communications are to be addressed to the Secretary of the Medical College.

Inasmuch as all students of medicine in New York State are required by law to have previously had an adequate preliminary education, and as this preliminary education must be certified to as sufficient by the State Educational Department, it is advisable that applicants for admission send to the Secretary of the Medical College at least a month before entering their degrees or properly attested certificates of graduation from an approved college or scientific school, in order that the Secretary may obtain the requisite "medical student's certificate" from the State authorities.

ADMISSION TO ADVANCED STANDING.

Students who have already attended the requisite number of courses in other accredited medical colleges, may be admitted to advanced standing in any one of the years of the four years' course of the Cornell University Medical College, by presenting the requisite entrance requirements (a college degree is not necessary for entrance into the present 3rd and 4th year classes), and by passing examinations in the subjects described on page 70 as completed, in the year or years previous to that which the student desires to enter. The applicant must also present certificates of having satisfactorily completed laboratory courses equivalent to those required of the Cornell medical students in the year or years previous to that to be entered.

According to law, no student applying for advanced standing from a Medical School which has not been registered by the Regents may obtain a degree on less than two years of medical study in this State.

ADMISSION TO SPECIAL COURSES.

Graduates in medicine, or students who desire to pursue a special course without graduation, are admitted to registration as special students, after approval by the head of the department conducting

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the course. Such special courses do not count in any way as part of the four years' course required of candidates for the degree of doctor in medicine. Further information regarding such courses, fees, etc., may be obtained by addressing the Secretary of the Cornell University Medical College, First Avenue, 27th to 28th Street, New York.

AMENDMENT TO MEDICAL LAW, 1902.

At their meeting, July 1, 1901, the Regents took the following action:

Voted, That, beginning with the September, 1901, medical licensing examinations, a recent photograph of each candidate be required as a part of the application for admission.

In accordance with the medical law, the Regents admit conditionally to the tests in anatomy, physiology, hygiene, and sanitation and chemistry, applicants 19 years of age certified as having studied medicine not less than two full years of at least seven months each, in two different calendar years, in a medical school registered as maintaining at the time a satisfactory standard; provided that such applicants are of good moral character, have the requisite preliminary education, and pay the fee of \$25; the final examinations in surgery, obstetrics, and gynecology, pathology including bacteriology, and diagnosis, to be passed after having finished the full period of study and having received the medical degree.

Candidates who have studied medicine not less than the minimum period of two years, whether undergraduates or graduates in medicine, are admitted conditionally as aforesaid to the examinations in anatomy, physiology, hygiene, and sanitation, and chemistry; if such applicants fail to attain 75 per cent. in one or more of these topics they must be reexamined in all topics and must wait at least six months before reexamination, and candidates failing to obtain at least 75 per cent. in one or more of the topics at the final examinations, after having passed in the preliminary topics, must be reexamined in all of the final topics and must wait at least six months before reexamination.

The Regents may, in their discretion, accept as the equivalent of the first year in a registered medical school evidence of graduation from a registered college course, provided that such college course shall have included not less than the minimum requirements prescribed by the Regents for such admission to advanced standing.

REQUIREMENTS FOR LICENSE TO PRACTICE MEDICINE IN THE STATE OF NEW YORK.

All requirements for admission should be filed at least one week before examination.—They are as follows:

1. Evidence that applicant is more than twenty-one years of age (Form 1).
2. Certificate of moral character from not less than two physicians in good standing (Form 1).

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3. Evidence that applicant has the general education required preliminary to receiving the degree of bachelor or doctor of medicine in this State (medical-student certificate. See examination handbook).

4. Evidence that applicant has studied medicine not less than four full school years of at least seven months each, in four different calendar years, in a medical school registered as maintaining at the time a satisfactory standard. New York medical schools and New York medical students shall not be discriminated against by the registration of any medical school out of the State, whose minimum graduation standard is less than that fixed by statute for New York medical schools.

First Exemption: "The Regents may in their discretion accept as the equivalent for any part of the third and fourth requirements, evidence of five or more years' practice of medicine, provided that such substitution be specified in the license."

5. Evidence that applicant "has received the degree of bachelor or doctor of medicine from some registered medical school, or a diploma or license conferring full right to practice medicine in some foreign country" (Form 2 of original credentials).

6. The candidate must pass examinations in anatomy, physiology, hygiene and sanitation, chemistry, surgery, obstetrics and gynecology, pathology, including bacteriology and diagnosis, therapeutics, practice, and materia medica. The questions "shall be the same for all candidates."

Second Exemption: "Applicants examined and licensed by other State examining boards registered by the Regents as maintaining standards not lower than those provided by this article, and applicants who matriculated in a New York State medical school before June 5, 1890, and who received the degree of M.D. from a registered medical school before August 1, 1895, may, without further examination, on payment of \$25 to the Regents, and on submitting such evidence as they may require, receive from them an indorsement of their licenses or diplomas, conferring all rights and privileges of a Regents' license issued after examination."

7. A fee of \$25 payable in advance.

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Examinations for license to practice medicine in this State will be held as follows:

	1909.	1910.
Winter	_____	Feb. 1-4
Spring	_____	May 24-27
Summer	June 22-25	June 28-July 1
Autumn	Sept. 21-24	Sept. 27-30

Places.

New York, Albany, Syracuse, Buffalo.

CHARGES FOR INSTRUCTION.

First Year.

Registration*	\$5.00	
Tuition	150.00	
Laboratory fees	35.00	
		\$190.00

Second Year.

Tuition	\$150.00	
Laboratory fees	35.00	
		\$185.00

Third Year.

Tuition	\$150.00	
Laboratory fees	35.00	
		\$185.00

Fourth Year.

Tuition	\$150.00	
Laboratory fees	25.00	
Graduation fees	25.00	
		\$200.00

Each student is required to pay to the clerk of the College the following amounts to cover breakage in the Laboratories and Dispensary departments:

1st year, Laboratory and Dispensary.....	\$10.00
2d year, Laboratory and Dispensary.....	15.00
3d year, Laboratory and Dispensary.....	10.00
4th year, Dispensary.....	5.00

*The registration fee is payable only once, on entrance.

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These deposits, less the amount charged for breakage, will be returned at the end of each year.

Tickets must be taken out and paid for at the beginning of the session.

SPECIAL STUDENTS.

Special students, on the recommendation of the head of the department concerned, may be admitted to any of the courses of instruction offered in the College, or to any course of instruction especially provided, on the payment of a registration fee of five dollars and a tuition fee of twenty-five dollars.

The graduation fee is payable on registering for graduation. The tuition fees for the first two years at Ithaca are identical with those of the same period in New York. All fees are payable at the beginning of the term, but in special cases they may be paid semi-annually in advance. No rebate will be made in any case.

No remission of laboratory fees will be made because of previous instruction elsewhere in the subjects.

EXPENSES OF STUDENTS.

The following estimate of the annual expenses of a candidate for a degree in the Medical School is based on the statements of students:

	<i>Low.</i>	<i>Average.</i>	<i>Liberal.</i>
Matriculation (once only).....	\$5.00	\$5.00	\$5.00
Tuition (as at present fixed).....	190.00	190.00	190.00
Books	16.00	28.00	35.00
Chemical apparatus	4.00	5.00	6.00 up
Room	92.00	130.00	190.00 "
Board	124.00	129.00	147.00 "
Clothes and laundry.....	59.00	80.00	112.00 "
College incidentals	16.00	21.00	24.00 "
Other expenses	46.00	74.00	98.00 "
Graduation fee (last year).....	25.00	25.00	25.00
Total	\$577.00	\$687.00	\$832.00

GENERAL STATEMENT OF THE PLAN OF INSTRUCTION.

The function of a Medical Department in a University is primarily to produce practitioners of the art of medicine of the highest possible efficiency. Within a comparatively recent period, however, this definition has become capable of interpretation in a much broader sense in that the school must include among its students not only those whose life is to be spent in the treatment of disease, but those who intend to become teachers of this art or of the branches of natural science upon which the art depends, as well as those who will devote their energies to advancing these sciences by research and to work connected with the public service. The Medical Department of the University has therefore developed into a school whose students are to be prepared to become practitioners of medicine and surgery, teachers of these subjects and their subsidiary branches, and investigators of biological problems which pertain to human disease and "preventive medicine." To reach this ideal, and to relieve the Medical Department from instruction in subjects which belong to natural science in general and not strictly to the medical curriculum, it is necessary that the students should have received the best possible preliminary education, which must include the amount of physics, inorganic chemistry and general biology outlined in the requirements for admission. As these courses are now given in practically all colleges, it suffices to point out their necessity to every prospective student of medicine, and to require that they each be pursued for at least one year as ordinarily given in the college, and then the education preliminary to entering upon the medical course can be considered the best obtainable though not necessarily the best possible. Some unusual individuals could, without doubt, by selecting studies, obtain a preparation for the medical school fully equivalent, if not superior, to that represented in the college course, and would, therefore, be very desirable candidates. Hence, to provide for such contingencies a committee consisting of the President of the University, the Dean of the College of Arts and Sciences and the Dean of the Medical School

has been empowered to consider the claims of any applicant who has followed a course of studies which can fairly be considered as at least equivalent to the four years of ordinary college training. No instance of this has as yet, however, been encountered.

In arranging the new course of study the subjects pertaining to pure rather than applied science are grouped in the first part of the first year of the medical course, those of the applied science in the second year, and the so-called practical subjects in the second and third years. The fourth year of the medical curriculum may in some measure be made elective in that a choice of groups of subjects in line with the students' expectations in his future career is desirable. Throughout the course, however, all students must take a minimum amount of the subjects which form the basis of the general practitioner's usefulness, and all are thus compelled to be prepared for successfully undergoing the usual competition for appointments as hospital internes, and for positions in the public service.

Custom and experience are in favor of a long summer vacation, and the utilization of the cool months alone for teaching. The Faculty have therefore decided on a period of thirty-two actual working weeks exclusive of the time occupied by holidays and examinations. This working period is divided into three terms, the first of eleven, the second of ten, and the third of eleven weeks. By this arrangement it is possible to obtain a certain degree of "concentration" in the teaching of those subjects in which the plan is advantageous, and it is thus also possible to introduce a proper sequence in the curriculum.

Anatomy and organic or biological chemistry, for example, cannot be crowded entirely into a short course to the exclusion of all other matter, and thus be assimilated and retained by the student. Physiology and physiological chemistry and bacteriology on the other hand can, and should be, "concentrated." These subjects involve pedagogical problems which are obvious. A great mass of more or less unrelated facts requires time to master, whereas a study like physiology, which is based upon physics, anatomy and chemistry, can be best pursued by working many consecutive hours in a comparatively brief period in which the laboratory observations follow each other in rapid succession, and one day's work explains the next.

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In the first year anatomy, histology, comparative morphology and organic chemistry occupy the entire first term. Anatomy, histology, organic chemistry with laboratory experiments, and embryology are placed in the second term. Histology, physiological chemistry, physiology and pharmacy, with one recitation weekly in anatomy, complete the year.

In the second year the major part of the first term is occupied with physiology and the study of medicine; surgery and obstetrics are begun by text-book recitations and conferences, and continued throughout the year. At the same time there is a course upon applied anatomy by demonstrations and recitations; this subject is then dropped, excepting one recitation a week, which is required until the end of the first year. Thereafter the study of anatomy is provided for as an elective recitation or laboratory course. The second term is chiefly filled with the subject of pharmacodynamics, which demonstrates the possible modifications of normal physiological processes by drugs and other means of therapeutics. During this period the students are taught to recognize the physical signs shown in the normal chest, abdomen and pelvis; they are also taught the anatomical and surgical landmarks upon the normal living subject, together with the nerve and muscle reactions. The third term has the afternoons filled with bacteriology, and gross and histological pathology is begun.

The course during the third and fourth years has not as yet been definitely determined, but will probably be in the main as follows:

In the first term of the third year, after the present junior and senior classes are graduated, it is expected to concentrate most of the lectures in medicine and surgery, and all of those in obstetrics. The pathological processes in special organs are studied histologically and by gross specimens. The recitation conferences in medicine, surgery and obstetrics are continued throughout this year with systematic practical exercises in medical and surgical diagnosis. In the second term every morning is devoted to clinical pathology and every afternoon to general medical and surgical clinics, together with clinics and clinical lectures in the specialties of gynecology, obstetrics, pediatrics and neurology. The third term has the afternoons devoted to those general and special clinics, and the mornings to surgical pathology and medical and surgical diagnosis in the wards of Bellevue or other hospitals, and

to obstetrical exercises on the manikin supplemented by obstetrical clinics.

In the summer between the third and fourth years the student must take a course in practical obstetrics.

In the first term of the fourth year it is intended that the mornings should be devoted to studying the problems of therapeutics by lectures and recitations, and in the laboratory and hospital wards. The afternoons will probably be given up to clinical lectures in all the specialties, except gynæcology, pediatrics, neurology and genito-urinary diseases, which will have been completed in the previous years. Thus at the conclusion of the first term of the fourth year every student will have been well grounded in anatomy, physiology, and all matters pertaining to the practice of medicine and surgery. Furthermore, the scheduled hours of instruction will not average more than 35 out of a possible 48 hours' weekly, which permits time for study or optional work in any one or more subjects of particular interest to individuals.

The last two terms of the fourth year after this thorough foundation can then be legitimately and profitably devoted to a large amount of elective work in whatever branch of the profession the student may desire to follow. But this work must follow certain definite lines and aggregate at least seven hundred (700) hours in these two final terms. Within these seven hundred hours, however, every student must have one recitation conference weekly in medicine, surgery and therapeutics, and during the second term a course of lectures on hygiene and preventive medicine to which may be added laboratory and practical demonstrations, and during the third term a course of lectures on medical jurisprudence and toxicology by Professor Witthaus. The elective courses in the two final terms of the fourth year are grouped into those suitable for students who intend, after their hospital service, for which all are prepared, to become general practitioners, surgeons or specialists in any line. The general practitioner should take laboratory and practical work, in addition to the amount of required work which all take, in clinical pathology, medical diagnosis and therapeutics (both experimental and clinical), obstetrical clinics, gynæcology, dermatology, genito-urinary diseases and pediatrics with infectious diseases, which can be observed at the City and Willard Parker Hospitals. The surgeon should elect similar laboratory

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and clinical work in surgical anatomy, diagnosis and pathology, gynecology, genito-urinary diseases, otology, dermatology and orthopædic surgery.

The intending specialist may concentrate all his elective time in the subjects to be followed after the usual hospital service, but the faculty reserves some measure of control in such a selection in that time may be required to be devoted to subjects in which the student's earlier record is poor. The expected small number of students and the intimate personal contact between the instructors and their classes render this both possible and advantageous.

As remarked before every graduate of this medical school is expected to pursue the usual interne service in some hospital. Even with the system of electives, possible in all years and compulsory in the two last terms of the fourth year, the instruction in the main branches of the practitioner's work is continued to the end of the course to fit the student to successfully compete with those from other colleges for the interne's appointment. For without a hospital training no physician should attempt to practice or to teach, and no specialist can be worthy of the name who has not had the broad foundation that such an education ensures.

Until the graduation of the present third and fourth year classes the following outline of studies will remain in operation during the coming session:

In the third year medicine, surgery, materia medica, therapeutics, and obstetrics are studied systematically from text-books and practically at the bedside, in the dispensary, and in general clinics. A sufficient number of didactic lectures are given by the Professors of Medicine and Surgery at the beginning of the session to explain general principles in symptomatology and diagnosis. Throughout the year the class must attend in small sections one or more daily recitations from standard text-books upon subjects previously assigned and learned. Pathology is studied in greater detail than previously, both in the laboratory and in the dead-house, and as far as possible morbid processes are demonstrated in advance of the study of the disease in the text-book or its clinical presentation.

In conjunction with the bedside teaching, instruction is given in all of the modern laboratory aids in diagnosis classified under the term of clinical pathology.

Students in groups of ten or twelve are taught the methods of

examining patients for the detection of abnormal physical signs, and at the close of the session are expected to be familiar with the recognition and treatment of the common diseases and be conversant with the fundamental subjects of a medical education. The specialties taken up in this year are neurology, pediatrics, toxicology, and gynecology. They are taught by clinical lectures as part of the general subjects of the practice of medicine, surgery, and obstetrics.

The fourth year is devoted chiefly to the study of diagnosis and treatment of disease at the bedside, in the dispensary, and in clinics. There are as few lectures as are consistent with the proper exposition of the chief problems confronting the profession, and these are delivered at the outset of the term, in order that the student may become familiar as soon as possible with the facts which are to be taught practically. For example, to the Professor of Medicine ten didactic lectures are assigned. This proportion has to be exceeded somewhat in therapeutics, obstetrics, and the specialties, but many of these lectures are illustrated by the presentation of typical cases and are really clinics. The clinical instruction in surgery is supplemented by an operative course in which the student performs upon the cadaver all the common operations. Particular attention is also given to the methods of making medical and surgical diagnoses, and in this connection constant use is made of the bacteriological and chemical laboratories, where the student examines specimens taken at the bedside during one exercise, and reports the results to the class at the next.

Hygiene and its application in the province of the physician and public health officer is taught by lectures supplemented by demonstrations of the plans and methods of the city health board.

The major part of the theoretical instruction, as in the previous years, is given by recitations in the subjects of medicine (including neurology), surgery (including orthopædic surgery and genito-urinary diseases), therapeutics and gynecology.

The instruction in the specialties, which is made the distinguishing feature of this final year, is begun with a few clinical lectures, and is continued by a course in the examination and treatment of dispensary patients by each student. Every one receives from fourteen to twenty-eight hours of this training (the number varies somewhat with the subject), and should become reasonably pro-

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ficient in the use of instruments, the ability to make diagnoses and give relief. There is no attempt made to produce experts, but each one before graduation must know enough about the specialized branches of medicine to be a competent general practitioner.

Every student must personally attend a definite number of cases of labor, and for this purpose the maternity service open to the college offers excellent opportunities. The Faculty earnestly recommend that this work be accomplished in the summer, preferably of the third year; by the proper choice of electives it is possible in the second summer, but this is not as desirable or profitable. If taken during the regular winter session much loss in other work may result. Those who for any proper reason cannot take this course as advised in the summer, might, however, succeed in obtaining the necessary cases during the winter by selecting odd hours when not engaged in section work, and by arrangement with the office to receive telephone calls.

DETAILS OF THE PLAN OF INSTRUCTION.

THE DEPARTMENT OF ANATOMY.

- I. Experimental Morphology.
- II. Embryology.
- III. Histology.
- IV. Anatomy.

GEORGE WOOLSEY, M.D., *Professor of Surgical Anatomy.*

IRVING S. HAYNES, M.D., *Professor of Applied Anatomy.*

CHARLES R. STOCKARD, Ph.D., *Assistant Professor of Embryology and Experimental Morphology.*

JEREMIAH S. FERGUSON, M.D., *Assistant Professor of Histology.*

ISRAEL STRAUSS, M.D., *Instructor in Gross and Microscopical Anatomy of the Nervous System.*

WESLEY M. BALDWIN, A.B., *Instructor in Anatomy.*

J. F. GUDERNATSCH, *Instructor in Embryology and Experimental Morphology.*

———, *Assistant in Histology.*

———, *Assistant in Histology and Embryology.*

I. Experimental Morphology.

The course is intended to acquaint the student with the general structures of systems and organs throughout the vertebrate phylum, and to furnish a more comprehensive basis for the study of human anatomy, embryology, physiology, and pathology. This course is provided in the first term of the first year.

The structure of the integument, muscular system, skeleton, alimentary tract, respiratory organs, reproductive and excretory systems and organs of special sense are demonstrated in amphioxus, fishes, amphibians, reptiles, birds and the lower mammals.

Special direction of investigations in comparative and experimental anatomy will also be given.

Laboratory, 40 hours (elective), and 11 hours' lectures (required).

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II. Embryology.

The course in embryology consists in laboratory exercises and lectures, and is designed to present the manner in which adult human tissues and organs are developed.

The work embraces the study of karyokinesis in its various phases; fertilization and consideration of heredity; cleavage as represented in the several types of vertebrate eggs; the processes of gastrulation and formation of germ layers; and the development of organs and systems in the bird, pig, and human embryo.

Serial sections, transverse and sagittal, of these embryos at various developmental stages are provided, and models are employed for illustration. The lectures and conferences are devoted to a discussion of the theories of development, and to a comparison of the phases in different groups of vertebrates. Special attention is devoted to those stages of development at which may result monsters, abnormalities and tumor-like inclusions. The causes of such anomalies are considered in the light of experimental embryology. The student is directed in collateral reading on these topics.

Laboratory exercises, 70 hours; lectures, 10 hours. Required in the middle term of the first year.

Text-books—Wiedersheim's *Comparative Anatomy of Vertebrates and Structure of Man*, and Parker and Haswell's *Zoölogy*, Vol. II, are used as general references, together with special works on the various subjects.

Assistant Professor Stockard and assistant.*

III. Histology.

COURSE I. HISTOLOGICAL TECHNIQUE.—The structure and use of the microscope and the methods of preparation of tissue for examination are considered. Laboratory work for 9 hours the first week and at occasional intervals throughout Course II. This course or its equivalent is required of first year students.

COURSE II. HISTOLOGY.—All the primary tissues of the body, including the vascular and lymphatic systems, are systematically studied both in the fresh condition and by means of stained sections. The methods of teasing and frozen sections will be used extensively and tissues studied with the aid of both dissecting and compound microscopes. Laboratory, recitations and conferences, 9 hours weekly for

10 weeks. October to December. Required of all first year students.

COURSE III. SYSTEMATIC COLLATERAL READING.—The student is referred to classics and desirable current literature bearing upon the subjects considered in Course II and taught the use and application of literature in its relation to histological work. This course is optional to first or second year students. First year students will find the value of Course II much enhanced if taken in conjunction with this elective course. The time required is about 6 hours a week for 10 weeks, October to December.

COURSE IV. MICROSCOPIC ANATOMY AND ORGANOLOGY.—The form and structure of all the thoracic and abdominal viscera and the special sense organs are systematically studied by means of anatomical demonstrations, the dissection of fresh material, and the histological study of the dissected organs and stained sections under the microscope. In addition to the sections prepared specially for the student the department has established a considerable collection of microscopical sections which are available for the illustration of special features and for advanced study. Laboratory and conferences, 9 hours weekly for 10 weeks, January to March. Required of all first year students.

COURSE V. ADVANCED WORK AND RESEARCH.—Each student receives individual attention in the laboratory. The more apt and proficient are thus enabled to advance rapidly through the work of the preliminary courses. Such students, who have satisfactorily completed Courses I, II and III, are at liberty to elect Course V, in which they will pursue such subjects as may have proved of special individual interest, and, if sufficiently proficient, topics for research will be suggested. This course is elective to all students who have completed the necessary preliminary work and who are in possession of a reading knowledge of French and German. Those who have had advanced biological training may elect this work at the beginning of the first year course. The student who elects this course is expected to devote to it at least 6 hours weekly.

Text-book—Ferguson's *Histology*.

Assistant Professor Ferguson and assistant.

IV. Anatomy.

The required courses in anatomy are given during the first and second terms of the first year, the first term of the second year, and

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an elective course provided in the first term of the fourth year of the college curriculum.

DESCRIPTIVE ANATOMY.

This is taught by means of laboratory exercises held in the dissecting room at stated hours.

The following are the courses required:

COURSE I. THE UPPER EXTREMITY.

COURSE II. THE HEAD AND NECK.—Includes the eye, ear, nose, mouth, pharynx and larynx.

COURSE III. THE LOWER EXTREMITY.

COURSE IV. THE TRUNK.—Includes the perineum, external genitals, thoracic and abdominal walls and viscera.

The required work in each course includes:

- (a) Recitations upon osteology and arthrology.
- (b) Demonstrations, study and recitations upon dissected and prepared specimens and from a standard text-book.
- (c) Dissection of the part.
- (d) Daily quizzes and recitations upon the work of the day during the entire period of each course.

(e) An oral examination at the completion of each course.

Laboratory hours, 255 (minimum). First and second terms of the first year.

Text-books.—Cunningham's *Manual of Practical Anatomy*, two vols.; Cunningham's *Text-book of Anatomy*.

Professor Haynes and Instructors in Anatomy.

COURSE V. NEURO-ANATOMY.

(a) The course for first year students. This is given in the second term of the first year. It consists in a practical course upon the gross anatomy of the brain, conducted in the laboratory by means of dissections of the human and sheeps' brains, a study of prepared specimens, sections and models with demonstrations and recitations upon the subject.

Laboratory, 22 hours.

(b) In the first term of the second year the histology of the central nervous system, together with the fibre-tracts and the nuclei, are studied. In connection with this course lectures and demonstrations

upon the physiology of the central nervous system are given in conjunction with the department of physiology.

Laboratory.

Text-book.—Cunningham.

Dr. Strauss.

COURSE VI. APPLIED AND TOPOGRAPHICAL ANATOMY.

(a) This course is given during the first term of the second year. It is conducted as a laboratory exercise together with recitations assigned from a standard text-book on applied anatomy. The students will study dissected and prepared specimens showing the anatomy of the various regions, and upon these and the whole subject will demonstrate the important facts of regional and topographical anatomy as applied to the practice of medicine and surgery.

Laboratory, 66 hours.

(b) Fourth Year. Elective.

COURSE VII. An elective course upon the practical and surgical anatomy of the eye, ear, nose, mouth, pharynx, larynx and the genito-urinary and generative systems will be offered in the first term of the fourth year.

This course is intended to offer the students a thorough review of the anatomy, practical and applied, of these various regions preparatory to their courses in the different specialties.

Laboratory, 22 hours.

Text-book.—Woolsey's *Applied Surgical Anatomy*.

Professor Haynes.

COURSE VIII. ADVANCED, SPECIAL, AND POST-GRADUATE WORK.—Facilities are offered to students and the medical profession for pursuing advanced, special, and post-graduate courses in practical anatomy.

PHYSIOLOGY.

GRAHAM LUSK, Ph.D., ScD., *Professor of Physiology*.

JOHN R. MURLIN, Ph.D., *Assistant Professor*.

Instruction in physiology begins with the students of the first year during the third term of that year. The object of this preliminary course is to furnish a sound foundation upon which to base the systematic instruction of the second year. The work of the first year consists in the demonstration of the fundamental experiments in physiology, in recitations and in personal instruction.

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The larger part of the course in physiology is given during the first half of the second year. There is a daily lecture. Following this, during three morning periods of three hours each, the student is in the laboratory and executes for himself the more important experiments concerned with animal and human physiology. The laboratory course commences with a study of the physiology of the free living cell and passes upward to the physiology of nerve and muscle. The phenomena of secretion, circulation, respiration, metabolism, the special senses and psychic relations are also taken up experimentally. Each student is examined before he leaves the laboratory for the day, in order to make sure that he understands what he has been doing.

One written and two oral recitations are held weekly. There is also a weekly conference at which the student presents in abstract form the contents of some classical paper on a great discovery in physiology, or the review of a recently published article of physiological import. The student is encouraged to use the library as he does the laboratory, since both are essential to correct thinking. A knowledge of French and especially of German is desirable in this connection.

Research workers who will give half or the whole of their day will be welcomed in the laboratory and granted every facility.

SUMMARY.

	<i>First Year.</i>	<i>Second Year.</i>
Lectures		96 hours.
Recitations		48 hours.
Laboratory	66 hours.	144 hours.

Text-books.—Howell's or Tigerstedt's (English or German) *Physiology*; Lusk, *Science of Nutrition*.

Collateral Reading.—Scientific journals.

CHEMISTRY AND TOXICOLOGY.

RUDOLPH A. WITTHAUS, M.D., *Professor of Chemistry, Toxicology and Medical Jurisprudence.*

CHARLES G. L. WOLF, M.D., *Assistant Professor of Chemistry.*

LOUIS W. RIGGS, Ph.D., *Instructor.*

The instruction in chemistry is concentrated in the first year, and is arranged upon the assumption that the student is already thoroughly grounded in the principles of chemistry and in physical

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SCHOLARSHIPS

TO THE SECRETARY OF THE MEDICAL FACULTY OF CORNELL UNIVERSITY:

Dear Sir.—I, the undersigned, hereby apply for a scholarship in the Cornell University Medical College for the year 19.....-19.....

[NAME.]

.....
[COLLEGE.]

.....
[DATE OF BIRTH.]

.....
[DEGREE.]

.....
[DATE OF DEGREE.]

.....
[DETACH AND SEND WITH PAPERS AND RECOMMENDATIONS.]

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SCHOLARSHIPS

In accordance with the action of the Board of Trustees of Cornell University, a limited number of scholarships covering free tuition will be awarded annually in the Cornell University Medical College, to graduates of approved colleges and scientific schools who have attained distinction in their college course.

These scholarships will be granted by the Faculty of the Medical College to students of high character and marked ability upon the basis of the credentials presented by the applicant.

Applications for Medical College scholarships should contain a full statement of the branches of study which the applicant has completed; and if any literary or scientific work has been produced which could be put in evidence, specimens should accompany the application. The candidates should also submit recommendations from the instructors best acquainted with their ability and attainments.

It should be borne in mind that information cannot be too exact or detailed in the case of students not personally known to the appointing body.

Applications and all credentials must be filed on or before the 1st of September of the year in which the scholarship is to be granted.

Applications for scholarships should be accompanied by applications for admission and the necessary credentials. Special attention is called to the requirements in physics, chemistry and biology.

The term of the scholarships is one year, but the term may be extended to two or more years, provided the extension does not increase the number of scholars beyond the limit set by the Trustees.

Communications should be addressed to the SECRETARY OF THE MEDICAL FACULTY, Cornell University Medical College, First Avenue and Twenty-eighth Street, New York City.

MARCH 1, 1909.

[ADDRESS AND DATE.]

.....19....

TO THE SECRETARY OF THE MEDICAL FACULTY OF CORNELL UNIVERSITY:

Dear Sir.—I, the undersigned, hereby apply for a scholarship in the Cornell University Medical College for the year 19....-19....

[NAME.]

.....

[COLLEGE.]

.....

[DATE OF BIRTH.]

[DEGREE.]

[DATE OF DEGREE.]

.....

[DETACH AND SEND WITH PAPERS AND RECOMMENDATIONS.]

CORNELL UNIVERSITY

ADMISSION TO THE MEDICAL COLLEGE

5. How many full years (in residence) have you attended regular instruction in the above institution?
6. How many years are required for the degree?
7. Give all degrees held by you, with dates
8. Have you done special work in Physics, Chemistry and Biology?
9. Have you sent a catalogue of the institution marking the exact subjects offered at entrance and those completed by you? If not, send one, placing plainly your name on the outside of the catalogue.

(*Name in full*)

(*Mail Address*)

CORNELL UNIVERSITY

ADMISSION TO THE MEDICAL COLLEGE

The following credentials are necessary: 1. Evidence of the degree or degrees already taken, *i. e.*, either a diploma or a statement from some official source (see page 3). 2. An official detailed statement of the work in Physics, Chemistry and Biology (see page 3). 3. A catalogue of the institution, marked showing subjects successfully completed. Send all credentials by mail as soon as possible. Do not hold and bring with you.

For admission in New York City, send to DR. J. S. FERGUSON,
Cornell University Medical College,
1st Avenue and 28th Street,
New York City.

For admission in Ithaca, send to DR. ABRAM T. KERR,
Cornell University Medical College,
Ithaca, N. Y.

To the Faculty:

I, the undersigned, respectfully apply for admission in September, 19...., to the Cornell University Medical College on credentials from..... College, and herewith submit the following answers to the questions in support of this application:

1. When did you enter the above institution?.....When did you leave?.....
2. State subjects offered at entrance and number of years' instruction in each.....
.....
3. What course did you enter?
4. Were you credited toward graduation with any courses at entrance?
5. How many full years (in residence) have you attended regular instruction in the above institution?
6. How many years are required for the degree?
7. Give all degrees held by you, with dates
8. Have you done special work in Physics, Chemistry and Biology?
9. Have you sent a catalogue of the institution marking the exact subjects offered at entrance and those completed by you? If not, send one, placing plainly your name on the outside of the catalogue.

(Name in full)

(Mail Address)

To the Faculty of Cornell University Medical College:

19.....

(Name.)

This is to certify that

received the degree of.....

June, ...

19.....

(Name of Institution.)

from

(Signed)
(Position)

BIOLOGY:

The candidate should have satisfactorily completed a year's work in Biology (or Botany and Zoology) comprising at least 90 hours of demonstration and class work, and at least 125 actual hours of laboratory work. It is recommended that the zoological part of the work should include some instruction in Embryology.

To the Faculty of Cornell University Medical College:

19.....

This is to certify that

(Name of Institution.)

has satisfactorily

completed in

the following courses in Biology

which in my opinion satisfies the above requirement.

(Signed)

(Position)

To the Faculty of Cornell University Medical College: 19....

(Name.)

This is to certify that
received the degree of..... June, ... 19....
(Name of Institution.)
from

(Signed)

(Position)

PHYSICS: The candidate should have satisfactorily completed a year's work in Physics, comprising at least 90 hours of demonstration and class work, and also work in physical measurement consisting of at least 90 actual hours in the laboratory.

..... 19....
To the Faculty of Cornell University Medical College:

This is to certify that has satisfactorily
(Name of Institution.)
completed in the following courses in Physics
.....
which in my opinion satisfies the above requirement.

(Signed)

(Position)

CHEMISTRY: The candidate should have satisfactorily completed a year's work in Chemistry covering introductory inorganic chemistry and the elements of qualitative and quantitative analysis. The inorganic chemistry should include at least 50 hours of class work, consisting either of recitations alone or recitations and experimental lectures, and not less than 80 actual hours of laboratory practice. The course in qualitative analysis should comprise 20 hours of class work and about 90 actual hours of laboratory work. It should include the detection of the more common acids and bases, and also the analysis of solid mixtures of a composition unknown to the student. The instruction in quantitative analysis should comprise 10 hours of class work and about 50 actual hours of laboratory practice, and should include both volumetric and gravimetric determinations.

..... 19....
To the Faculty of Cornell University Medical College:

This is to certify that has satisfactorily
(Name of Institution.)
completed in the following courses in Chemistry
.....
which in my opinion satisfies the above requirement.

(Signed)

(Position)

BIOLOGY: The candidate should have satisfactorily completed a year's work in Biology (or Botany and Zoology) comprising at least 90 hours of demonstration and class work, and at least 125 actual hours of laboratory work. It is recommended that the zoological part of the work should include some instruction in Embryology.

..... 19....
To the Faculty of Cornell University Medical College:

This is to certify that has satisfactorily
(Name of Institution.)
completed in the following courses in Biology
.....
which in my opinion satisfies the above requirement.

(Signed)

(Position)

chemistry. The object aimed at is not to produce analysts, but to impart that fundamental knowledge of organic and physiological chemistry which is necessary to the comprehension of the bearings of chemistry upon medicine.

Lectures.—There will be two lectures weekly during the first and second terms upon organic chemistry. The subject will be discussed to an extent sufficient to impart a knowledge of the principles of combination and reactions of the carbon compounds, and the properties and relationships of those which are of physiological, toxicological or therapeutical interest.

During the third year one lecture will be given weekly on toxicology for twenty weeks. In these lectures the medical and medico-legal bearings of the subject will be chiefly considered. After the session of 1909-1910 this course will be extended, and will include Medical Jurisprudence, i.e., the legal regulation of the practice of medicine, and the rights and obligations of physicians and surgeons under the law.

Recitations.—There will be one recitation weekly during the first and second terms, and two weekly during the third. While the subjects of these recitations will be assigned from a text-book, they will also follow the lectures closely, and will be in review thereof.

Laboratory Work.—During the second term there will be two two-hour sessions weekly in organic chemistry. An extended course in this subject is obviously impossible in so brief a period. This work will therefore be directed mainly to an amplification of the lectures and recitations on those points in which laboratory manipulations are desirable.

During the third term there will be three three-hour laboratory sessions in physiological and clinical chemistry. This course will include the study of the reactions of the carbohydrates, fats and proteins; of the composition of the salivary, gastric, pancreatic and intestinal secretions and the bile, and their actions in digestion; of the fæces, urine, blood and milk; and of the examination of pathological fluids, concretions, stomach contents, etc. The study of metabolism will receive particular attention. The arrangement of this course is in coaptation with those in physiology and in clinical pathology.

CORNELL UNIVERSITY MEDICAL COLLEGE.

In the laboratory courses each student is supplied with all apparatus and chemicals required.

These courses are conducted by the instructors, under the direction of the Professor of Chemistry.

The laboratory will be open during "optional hours" to students of any year who desire to prosecute advanced work or research, subject to the regulations of the office.

SUMMARY.

	1st Term.	2nd Term.	3rd Term.	3d Year.
Recitations	11	10	22	
Laboratory		40	99	
Lectures	22	20		20

Text-books.—Witthaus, *Manual of Chemistry*, sixth edition; Holleman, *Laboratory Manual*; Hawk, *Practical Physiological Chemistry*, second edition.

PHARMACOLOGY AND MATERIA MEDICA.

ROBERT ANTHONY HATCHER, Ph.G., M.D., *Professor of Pharmacology and Materia Medica.*

WARREN COLEMAN, M.D., *Professor of Clinical Medicine and Applied Pharmacology.*

HAROLD C. BAILEY, M.D., *Instructor in Pharmacology.*

ARCHIBALD E. CHACE, M.D., *Instructor in Materia Medica.*

RICHARD WEIL, M.D., *Instructor in Pharmacology and Materia Medica.*

FIRST YEAR.

Materia Medica and Pharmacy.

Laboratory.—Four hours a week during the third trimester will be devoted to the consideration of crude drugs and their preparations. The Pharmacopœial preparations of the different pharmaceutical classes will be made by the students, and demonstrations and individual practice will be given in the more common incompatibilities to be avoided in prescriptions. Some of the demonstrations are intended to show the simplicity of certain processes often deemed difficult or impossible without special apparatus.

Each laboratory exercise will be preceded by an informal discussion of the work to be done. Dr. Chace.

SECOND YEAR.

Pharmacology.

Lectures.—During the second trimester forty-five hours will be devoted to lectures, conferences, and written reviews on Systematic Pharmacology. The lectures will be illustrated in part by demonstrations and by tracings taken from research experiments. Dr. Hatcher.

Laboratory.—Concurrently with the lectures on Systematic Pharmacology ninety hours will be devoted to the laboratory study of the subject. The experiments are designed to illustrate a wide range of pharmacologic actions, the more important drugs being considered with reference to their actions on different structures. Professor Hatcher and Dr. Bailey.

THIRD YEAR.

Applied Pharmacology and Materia Medica.

Lectures.—Forty hours will be given to a consideration of the therapeutic actions of the more important members of the materia medica. The subject will be treated with especial reference to the application of pharmacologic principles to the therapeutic uses of the drugs. Professor Coleman.

Conferences and Recitations.—In this course the instruction can be adapted to the individual needs of the student to a greater degree than is possible in formal lectures. The materia medica will be considered with reference to the physiological actions, dosage, therapeutics and toxicology. The student will be given exercises in writing prescriptions for special conditions. Dr. Weil.

ELECTIVE.

FIRST YEAR.

Advanced Pharmacy.

Laboratory.—A more extensive knowledge of Pharmacy than that given in the first year, although desirable, is not essential to the medical student. Opportunity will be afforded for extending the regular course and for the chemical examination of vegetable drugs.

CORNELL UNIVERSITY MEDICAL COLLEGE.

SECOND AND THIRD YEARS.

Research.

Students will be encouraged to conduct original research under the supervision of the several members of the staff.

Such work affords a valuable insight into pharmacologic methods, and assists in the formation of a correct estimate of the original work of others.

SUMMARY.

	<i>First Year.</i>	<i>Second Year.</i>	<i>Third Year.</i>
Lectures	30 hours.	30 hours.	
Recitations			30 hours.
Laboratory	30 hours.	90 hours.	

Text-book.—Sollmann, *A Text-book of Pharmacology.*

Collateral Reading.—Cushny, *Pharmacology and Therapeutics*; Schmiedeberg, *Pharmacologie*; Heinz, *Handbuch der experiment. Path. und Pharmacologie*; Kobert, *Lehrbuch der Intoxicationen*; Hatcher and Sollmann, *A Text-book of Materia Medica*; Coleman, *A Syllabus of Materia Medica*; Arny, *Principles of Pharmacy.*

MEDICINE.

W. GILMAN THOMPSON, M.D., *Professor of Medicine.*

Professors of Clinical Medicine,

ALEXANDER LAMBERT, M.D.,	CHARLES . NAMMACK, M.D.,
LEWIS A. CONNER, M.D.,	C. N. BANCKER CAMAC, M.D.

Instructors and Assistants,

MONTGOMERY H. SICARD, M.D.,	HUGHES DAYTON, M.D.,
FREDERICK L. KEAYS, M.D.,	NATHANIEL R. NORTON, M.D.,
THEODORE B. BARRINGER, M.D.,	WALTER L. NILES, M.D.,
WALTER A. DUNCKEL, M.D.	

THOMAS WOOD HASTINGS, M.D., *Professor of Clinical Pathology.*

Instructors and Assistants,

MORTIMER WARREN, M.D.,	JOHN W. COE, M.D.,
BERT R. HOOBLER, M.D.	

The Course of Medicine comprises a graded plan of study extending throughout three years. General didactic lectures upon the practice of medicine are wholly supplanted by bedside and dis-

pensary instruction and recitations. The course includes the following subdivisions:

Second Year:

Recitations from a text-book upon elementary medicine, with written reviews. Physical diagnosis of the heart and lungs and other organs.

Third Year:

1. Recitations from an advanced text-book, with written reviews.
2. Physical diagnosis of the heart and lungs.
3. History-recording.
4. Bedside course in symptomatology.
5. Dispensary course in general medicine.
6. Clinical pathology.
7. Twenty lectures on symptomatology.
8. Hospital medical clinics.

Fourth Year:

1. Advanced bedside study in symptomatology, diagnosis, and treatment.
2. Demonstrations of patients by the student before the class in the out-patient clinic.
3. Physical diagnosis.
4. Hospital medical diagnosis clinics.
5. Ten lectures upon diatheses, toxæmias, etc.
6. Elective advanced work in clinical diagnosis, clinical pathology, history-recording, etc.
7. Recitations in medicine.

The details of the methods of instruction in medicine for each year of the curriculum are as follows:

SECOND YEAR.

Recitations.—Second-year students begin the study of medicine with systematic recitations once each week from an elementary text-book, in which the subjects of nomenclature, etiology, morbid anatomy, and typical symptoms only are dwelt upon.

Physical Diagnosis.—This subject, which at present is taught in the third year of the medical course, will hereafter be transferred to the second year, and the course will be extended from thirty to ninety-six hours.

The instruction in the third and fourth years hereafter given to students admitted to the College on the basis of graduation in arts and science has been summarized in the preliminary statement regarding the new courses made upon page 30. It will be most comprehensive and thorough, and will comprise lectures, recitations, clinics in the hospitals and dispensaries, ward section work,

CORNELL UNIVERSITY MEDICAL COLLEGE.

clinical laboratory exercises and a limited number of optional courses.

THIRD YEAR (of the present course).

Recitations.—Third-year students recite twice each week from an advanced text-book on the Practice of Medicine, special emphasis being given to symptomatology, complications, diagnosis, and treatment.

Written reviews are held at intervals to familiarize the student with examinations. All recitations are obligatory, and the recitation marks received form an important component of the final examination marks of the year.

Ward Work.—Systematic and obligatory ward work is begun in classes not exceeding fifteen students each, who accompany the Professors of Clinical Medicine on rounds through the hospital wards. Examples of all the common diseases are studied, and the student has opportunity personally to examine many cases of disease in different stages of development, and of following their daily progress. A special course in general medical diagnosis is given at the bedside, in which the student observes cases illustrating all the important physical examinations.

Dispensary Classes.—Students in small classes are instructed in general medical diagnosis by Dr. Barringer and Dr. Dayton in the new Out-Patient Department of Bellevue Hospital.

Clinical Laboratory Courses are conducted in immediate connection with the study of hospital and dispensary cases.

The laboratory is designed to meet the three requirements of:

(1) *Teaching*; (2) *Original Research*, and (3) *Diagnosis*.

(1) *Teaching.* The third year class is divided into small sections, so that each member receives the personal assistance of the demonstrator. At the conclusion of the course a written and practical examination is held, and the result of this, as well as the character of the work done by each student, is included in the general average mark received by him in medicine. When assigned to cases at the general medical clinic in the fourth year the student is required to report the result of his examination of the sputum, blood, urine, etc.

The apparatus employed may readily be transported to the bedside, the work being thus essentially practical, and the student

himself uses it so that he may become familiar with its care and application.

The course comprises the thorough study of the sputum, blood, gastric contents, fæces, urine, exudates and transudates.

Each student is furnished typical specimens, which he stains and studies at the demonstrations.

(2) *Original Research.* Facilities are offered to graduate and undergraduate special students for the undertaking and publication of original investigations.

(3) *Dispensary, Hospital, and Clinical Laboratory Examinations.* The laboratory is a working part of the Cornell Dispensary. The visiting staff of this Dispensary, as well as that of the Second Division of Bellevue Hospital, use the laboratory extensively for completing the data of their cases. Students who have completed their third year, and whose standing is good, may, under the supervision of the instructors, employ their summer months in following this work in the laboratory.

Physical Diagnosis.—Physical diagnosis of the chest is taught in classes not exceeding a dozen students each. This course of 30 lessons for each class is very comprehensive, owing to the large number of patients in the class of heart and lung diseases at the College Dispensary and in the wards and Out-Patient Department of Bellevue Hospital.

The work consists of the study of:

- (1) Medical anatomy of the normal thorax and abdomen and physical signs of the contained viscera.
- (2) Pathological conditions of the thoracic and abdominal viscera with special reference to Methods of Physical Examination; Physical Signs in Disease.

General Medical Clinics.—Students of the third year are required to attend a clinic in medical diagnosis conducted by Professor Thompson, and the clinics in general therapeutics, as described for the fourth year. These clinics are held weekly in the amphitheatre of Bellevue Hospital.

Lectures.—A course of twenty lectures upon general symptomatology is given by the Professor of Medicine, which is designed as introductory to the systematic bedside teaching which he conducts upon hospital rounds.

CORNELL UNIVERSITY MEDICAL COLLEGE.

FOURTH YEAR (of the present course).

Bedside Instruction is given by the Professor of Medicine to sections not exceeding fifteen students, in the wards of the Presbyterian Hospital until January 1st, and in those of Bellevue Hospital thereafter, throughout the year. In these sections each student is assigned in turn to special cases for thorough study. Ward classes are also conducted by Professor Conner at the Hudson Street Hospital.

Clinics.—Medical clinics are held weekly in the amphitheatre of Bellevue Hospital by the Professor of Medicine. At these clinics students read written histories of cases which they have previously studied in the hospital wards. They are required to demonstrate their findings upon the patient, and are questioned before the entire class in regard to diagnosis and treatment. These clinics are also utilized by the Professor of Medicine to exhibit cases of exceptional rarity or difficult diagnosis, and a few of them are conducted in coöperation with the Professor of Surgery in order to present to the students the value of conjoint medical and surgical points of view in appropriate cases.

An out-patient clinic is also held weekly by the Professor of Medicine in the Dispensary of the College, at which students are given ample opportunity to examine patients, study minor ailments, as well as all the forms of disease in the ambulatory cases of a large and varied clinical service.

Dispensary Classes, comprising a dozen students each, are conducted in periods of five weeks for two hours twice a week. The students are taught methods of complete general physical examination, diagnosis, prognosis and treatment, and of history recording. Opportunity is afforded to follow the progress of cases from week to week, and to make clinical examinations of the sputum, blood, etc., in each case.

Lectures.—A course of ten lectures is given by the Professor of Medicine upon such general topics as the diatheses, toxæmias, auto-intoxication, cachexias, etc. Lectures are also given by Professor Conner upon the Internal Secretions, and Professor Camac upon (1) diabetes and allied conditions, and (2) the muscular and nervous systems of the heart clinically considered.

An elective course in advanced clinical pathology and diagnosis is offered in the fourth year.

CORNELL UNIVERSITY MEDICAL COLLEGE.

SUMMARY.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		20 hours.	10 hours.
Recitations	32 hours.	32 hours.	32 hours.
Clinics		32 hours.	64 hours.
Sections	96 hours.	55 hours.	90 hours.

CLINICAL PATHOLOGY.

Laboratory recitations and lectures.... 120 hours.

Text-books.—Osler, *Practice of Medicine*; Musser, *Medical Diagnosis*; Tyson, *Physical Diagnosis*; Salinger and Kalteyer, *Medicine*; Woods, *Chemical and Microscopical Diagnosis*.

SURGERY.

LEWIS A. STIMSON, M.D., *Professor of Surgery.*

Professors of Clinical Surgery,

FREDERIC S. DENNIS, M.D.,
GEORGE WOOLSEY, M.D.,
FREDERICK KAMMERER, M.D.,
WILLIAM B. COLEY, M.D.,

FREDERICK GWYER, M.D.,
PERCIVAL R. BOLTON, M.D.,
CHARLES L. GIBSON, M.D.,
JOHN A. HARTWELL, M.D.

Instructors,

BENJAMIN TILTON, M.D.,
JOHN ROGERS, M.D.,
BURTON J. LEE, M.D.

JAMES MORLEY HITZROT, M.D.,
J. PRESCOTT GRANT, M.D.,
WILLIAM A. DOWNES, M.D.

ARCHIBALD E. ISSACS, M.D.

Surgery is taught in the recitation room, at the bedside, in the dispensaries, at hospital clinics, and by lectures.

In the second year the students are required to attend recitations on the principles of surgery two hours a week throughout the term, and are instructed in Bellevue Hospital in surgical examination and diagnosis.

In the third year recitations are continued upon regional surgery; the class is instructed in sections in Bellevue Hospital in history-taking and methods of surgical examination and diagnosis, three hours a week for part of the term; and also two hours a week bed-

CORNELL UNIVERSITY MEDICAL COLLEGE.

side instruction. Formal clinics are held in Bellevue and other hospitals; about fifty lectures are given by the Professors of Surgery, and a clinic for diagnosis is held once a week throughout the term, at which the students are required personally to examine and report upon the cases.

In the fourth year the students receive clinical instruction in small groups in several hospitals and dispensaries upon general surgery and the special branches—eye, ear, nose and throat, genito-urinary diseases, gynecology, dermatology and orthopædics; may attend the lectures and clinics, and will have a review quiz in preparation for examination.

The members of the sections are trained in the examination of patients, the dressing of wounds and fractures, the administration of ether and assisting at operations.

The opportunities for instruction in the special branches are exceptionally ample. There are several clinical teachers in each subject, each with hospital and dispensary services. The student will be enabled directly to examine and study cases, and will have a certain choice as to the time given to each branch.

In addition, to the clinics at Bellevue Hospital specified above, Professor Kammerer will give clinics once a week at the German Hospital, which the seniors attend in groups of twelve. Clinics of a similar character by other members of the faculty will be announced from time to time as opportunity during the session arises.

Lectures on special topics are given in the college lecture courses in the second term, to which students of all the classes are admitted.

Operative Surgery is taught to small sections of the class in the fourth year. The course consists of recitations, work upon the cadaver, and the application of bandages and plaster dressings. As the material is abundant, each member of the class will perform the principal surgical operations.

In connection with the Alumni Hospital the students will have opportunities directly to assist in operations. These operations are not experimental or vivisectional, but solely for the relief of existing disease.

Special instruction in operative surgery is offered to graduates in medicine. A circular giving particulars may be had on application to the Secretary.

CORNELL UNIVERSITY MEDICAL COLLEGE.

SUMMARY.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		40 hours.	40 hours.
Recitations	60 hours.	60 hours.	30 hours.
Clinics		86 hours.	86 hours.
Sections		40 hours.	25 hours.
Operative Surgery			30 hours.

Text-book.—*American Text-book*, Rose and Carless.

Collateral Reading.—Parks, *Surgery*; Stimson, *Fractures and Dislocations*; *Operative Surgery*; Dennis, *System of Surgery*.

OBSTETRICS.

J. CLIFTON EDGAR, M.D., *Professor of Obstetrics and Clinical Midwifery.*

Instructors,

GEORGE D. HAMLEN, M.D.,

ALBERTUS A. MOORE, M.D.

Instruction in obstetrics will be given during the second, third, and fourth years by—

1. Recitations. 2. Illustrative lectures. 3. Obstetric clinics and conferences. 4. Attendance upon cases of confinement. 5. Manikin practice and section work. 6. Obstetric histology, pathology, and bacteriology.

1. **Recitations** from a standard text-book will be held by an instructor in obstetrics during the second year upon the physiology, and during the third upon the pathology, of obstetrics, the latter including obstetric surgery.

These recitations are so scheduled as to cover the field of the subject laid out for the college year, are supplementary to the work of the Professor of Obstetrics during each of these two years, and prepare the student for an intelligent appreciation of his subsequent illustrative lectures, attendance upon cases of confinement, clinics, and manikin practice.

2. **The Illustrative Lectures** comprise a systematic course running through the third year, upon the physiology and pathology of obstetrics.

These lectures are theoretical to a limited extent only, being mainly demonstrative and illustrative in character. To this end

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ample blackboard space is used, as well as an abundant collection of pelves, entire, normal and deformed, mesial sections of the same, and in addition a supply of diagrams, charts, carefully selected plaster, composition, and metal models, wet and dry preparations, and instruments.

3. Obstetric Clinics and Conferences.—A weekly obstetric clinic is held by Professor Edgar a portion of the year for both the third- and fourth-year classes at the Manhattan Maternity and Dispensary, 327 East 60th Street. At this clinic abnormal cases of pregnancy, labor, and the puerperium are demonstrated, and the major and minor obstetric operations performed.

In addition, infant feeding and the care of mother and child during the lying-in period and early infancy are taught. During both the third and fourth year, members of the class will be called upon to examine patients and discuss etiology, diagnosis, prognosis, and treatment.

4. Attendance upon Cases of Confinement.—Each candidate for the degree of M.D. is required to present satisfactory evidence to the effect that he has attended a definite number of cases of confinement. To fulfil this requirement students may register as internes in the Manhattan Maternity and Dispensary, 327 East 60th Street, and receive this practical instruction from Professor Edgar and the instructor in obstetrics. Students are lodged in the above hospital for periods of two weeks or more, and attend confinement cases both in the hospital building and in the tenement-house districts of the upper east side of the city.

During the student's attendance upon his practical maternity course he may be excused from the exercises of the College during the fourth college year, otherwise he shall take his practical obstetric course during vacation time. Further information concerning the practical obstetric work may be obtained by applying at the Secretary's office.

5. Manikin Practice and Section Work.—Manikin practice is given to sections of the class during the third year, and consists of work by individual students upon the manikins, under the supervision and criticism of an instructor.

The mechanical phenomena of labor; modes of delivery; ab-

CORNELL UNIVERSITY MEDICAL COLLEGE.

normal presentations and positions, with methods of delivery of each; version; application of the forceps, and other manipulations, will be demonstrated by the instructor and performed by the student.

Diagrams, models, casts, wet and dry specimens, will be used in the demonstrations.

The sections will also be instructed at the bedside at Bellevue Hospital and Manhattan Maternity and Dispensary in the management of pregnant and parturient women, the care of the newborn child, abdominal palpation, and pelvic mensuration.

6. Obstetric Histology, Pathology, and Bacteriology.—Laboratory instruction is given during the third year by the Assistant Professor of Histology upon the histology of the vulva, vagina, uterus, ligaments, Fallopian tubes, and ovaries in the pregnant and non-pregnant conditions, and upon the histology and pathology of the decidua, chorion, placenta, and umbilical cord.

SUMMARY.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		30 hours.	
Recitations	30 hours.	30 hours.	
Clinics		15 hours.	15 hours.
Sections		15 hours.	

Text-book.—Edgar, *Practice of Obstetrics.*

DEPARTMENT OF PATHOLOGY.

General Pathology, Pathological Anatomy, Experimental Pathology, Chemical Pathology, Bacteriology.

JAMES EWING, M.D., *Professor of Pathology.*

BERTRAM H. BUXTON, M.D., *Professor of Experimental Pathology.*

WILLIAM J. ELSER, M.D., *Professor of Bacteriology.*

OTTO H. SCHULTZE, M.D., *Assistant Professor of Pathological Anatomy.*

MAX G. SCHLAPP, M.D., *Instructor of Neuropathology.*

JAMES C. JOHNSTON, M.D., *Instructor in Pathology.*

PHILIP A. SHAFFER, Ph.D., *Instructor in Chemical Pathology.*

JOHN C. TORREY, Ph.D., *Instructor in Experimental Pathology and Lecturer in Hygiene.*

FRANK M. HUNTOON, M.D., *Instructor in Bacteriology.*

CORNELL UNIVERSITY MEDICAL COLLEGE.

HARRY T. LEE, M.D., *Assistant in Pathology.*

DOUGLAS SYMMERS, *Assistant in Pathology.*

THOMAS A. NEAL, M.D., *Assistant in Pathological Anatomy.*

JAMES B. GERE, M.D., *Assistant in Neuropathology.*

LEOPOLD JACHES, M.D., *Instructor in Microphotography.*

ALFRED RAHE, *Assistant in Experimental Pathology.*

ERNEST A. REINOSO, *Assistant in Chemical Pathology.*

GENERAL PATHOLOGY.

The course of instruction in Pathology in the second year comprises a preliminary set of lectures on the theory and classification of inflammations, which is designed to acquaint the student with the main facts in this field, to prepare him for studies in medicine and surgery, and to establish a uniform system of nomenclature to be used in this and other departments. In the third term of the second year systematic laboratory instruction is begun with microscopical demonstrations and lectures on the pathology of Degeneration, Inflammation, Infectious Granulomata, and Tumors. At the same time demonstrations of gross pathological specimens are conducted illustrating these and other diseases, while the work in Bacteriology occupies the afternoon hours of this session.

In the first term of the third year the Special Pathology of the organs is taken up, including Dermatopathology and Protozoan Diseases, and demonstrations in Pathological Anatomy are continued. The second term of the third year is occupied with courses in the Pathology of Surgical Diseases, Gynæcological conditions and Diseases of the Nervous System.

In the fourth year the student performs autopsies, and attends Lectures in Hygiene, Immunity, and other selected topics.

During the year 1909-10 the schedule previously announced for the third year of the curriculum will be adhered to, according to which the courses in Pathology occupy the hours from 10-12 each morning throughout the year, and one recitation hour weekly.

SCHEME OF INSTRUCTION IN PATHOLOGY.

I. Pathology of Inflammation.—Ten lectures. Required at the opening of the second year. Prof. Ewing.

II. General Pathology.—Lectures, museum and microscopical

demonstrations, 100 hours. Required in the third term of second year.

(a) Degeneration, Inflammation, Infectious Granulomata, 66 hrs., March, April.

(b) Tumors, 33 hrs., April, May.

III. Special Pathology. Lectures, museum and microscopical demonstrations, 200 hrs. Required in first and second terms of third year.

(a) General Diseases. 62 hrs., Oct., Nov.

(b) Dermatopathology. 18 hrs., Dec.

(c) Protozoan Diseases. 18 hrs., Dec.

(d) Surgical Pathology. 36 hrs., Jan'y.

(e) Gynæcological Pathology. 18 hrs., Feb'y.

(f) Neuropathology. 36 hrs., Feb'y, March.

Prof. Ewing, Drs. Johnston, Lee and Symmers.

IV. Pathological Anatomy.—On the days alternating with the studies in General and Special Pathology demonstrations of gross pathological specimens are held on the material collected from autopsies. With the viscera of each case is presented an epitome of the clinical history, and when necessary frozen sections of the organs are made, and the relation of the gross and microscopical changes to the clinical symptoms is explained. The student here sees the organs of many of the fatal cases studied in hospital wards. Gross pathological diagnosis is taught as a separate branch of this subject.

Lectures and demonstrations, 128 hrs. Required in the third term of second year, and in first and second terms of third year. Assistant Professor Schultze and Dr. Neal.

V. Medico-legal Pathology.—The medico-legal relations of Pathology are extensively illustrated in the material collected at the Morgue and various hospitals, and special attention is devoted to this subject in the third and fourth years.

VI. Autopsy Technics.—In the fourth year the student performs autopsies at the Morgue during a session of six weeks, three exercises weekly. Fifty hours. Assistant Professor Schultze and Dr. Neal.

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VII. Lectures in Special Pathology.—Lectures on special topics in Pathology are given during the third and fourth years. The lectures cover such subjects as Immunity, The Etiology of Tumors, Cerebral Hemorrhage, The Pathology of Diseases of Nutrition, The Comparative Morphology of the Cerebral Cortex. At suitable times the topics that are being pursued in the research laboratories and the objects of these researches may be presented to the student in special lectures. Profs. Ewing, Elser, Beebe, Schultze, and Drs. Schlapp and Shaffer.

VIII. Recitations.—One recitation every week is required of each student throughout the course in General and Special Pathology. These exercises cover the work of the preceding week, and are of the nature of conferences for the fuller discussion of the topics considered.

IX. Examinations.—Written and practical examinations are held at the end of each year. The standing of the student is determined from the theoretical and practical work, the recitations, and the examination.

EXPERIMENTAL PATHOLOGY.

In this department are associated a number of men whose time is devoted to the study of problems in medical science. Abundant space and modern facilities are provided in the Loomis Laboratory, in which are laboratories equipped for Experimental Pathology, Bacteriology and Hygiene, Serum Pathology, Chemical Pathology, and Microphotography. Instruction has been given to a number of assistants and volunteer workers who desired to enter the field of research in these subjects, and is available to properly qualified applicants.

The members of this staff include: Prof. Buxton, Dr. Torrey, Dr. Shaffer, Dr. Jaches, Mr. Rahe, Mr. Reinoso, and others.

Since 1904 the work of the Huntington Fund for Cancer Research has been located in the Loomis Laboratory under the immediate direction of Profs. Buxton and Beebe.

The organized work in connection with this subject has been distributed among the Departments of Pathology, Prof. Ewing; Experimental Pathology, Prof. Buxton; Chemical Pathology, Dr. Shaffer; Embryology and Experimental Morphology, Prof. Stock-

ard; Experimental Therapeutics, Prof. Beebe, and the various clinics, especially that of Prof. Coley at the General Memorial Hospital; those of Profs. Alexander and Hartwell, assisted by Dr. B. J. Lee, at Bellevue Hospital, and that of Dr. T. G. Sherwood, D.V.S.

DEPARTMENT OF EXPERIMENTAL THERAPEUTICS.

S. P. BEEBE, M.D., *Assistant Professor of Experimental Therapeutics.*
RICHARD WEIL, M.D., *Instructor in Experimental Therapeutics.*

The Department of Experimental Therapeutics has been established in order to facilitate the application of the medical sciences to the problems of practical therapeutics and to coördinate the work of the other scientific and clinical departments in this field. The Loomis Laboratory has been remodeled in order to provide proper accommodations for this work. New laboratories have been equipped with modern facilities for work in physiology, pathology, serum pathology and physiological chemistry, with ample space for the care of the animals and a fully equipped operating room.

The permanent staff of the department includes workers who have specialized in several different fields: Dr. Weil in Pathology, Dr. Cooke in Physiology, and Dr. Riggs in Chemistry.

Opportunities for research will be afforded to volunteer workers who have had the requisite training, and who can give sufficient time. The location of the laboratory near to the new Bellevue Hospital assures an abundance of clinical material.

The establishment of these laboratories will make it possible to extend the work of the Huntington Fund for Cancer Research in the direction of Experimental Therapeutics.

DEPARTMENT OF GENERAL THERAPEUTICS.

FRANK S. MEARA, M.D., *Professor of Therapeutics.*

Instructors,

SAMUEL MILBANK, M.D.,

CHARLES E. S. WEBSTER, JR., M.D.

The courses here outlined will obtain for the years 1909 to 1911, when they will be modified and elaborated to meet the requirements entailed by the new standards of admission adopted in 1908.

This department, which is essentially one of Applied Therapeutics, coöperating closely with the departments of Chemistry,

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Pharmacology and Materia Medica, and of Experimental Therapeutics on the one hand, and with the Department of Medicine on the other, will seek to correlate the results of these different fields of work, so far as they relate to the treatment of the individual sick.

It will be the effort of this department to make the courses pre-eminently practical, and to offer to the student something tangible in his future relation to the patient as medical advisor.

To this end the following courses will be offered:

Didactic Lectures.—These lectures will be given by the head of the department to the fourth-year students, one each week for the first half year, and two each week for the second half year.

They will deal with the theories and modes of therapy and with the application of therapeutic measures, but always with reference to definite types of disease.

Clinical Lectures.—These lectures, one each week throughout the year, will be given to the fourth-year students in the clinical amphitheatre of Bellevue Hospital by the head of the department.

Here the patient, the subject of the disease, is the theme for discussion, illustrating the deviations from the type, the modification in practice of measures determined by theory and visualizing the progress of events as determined by therapy.

Section Work in the Wards of Bellevue Hospital.—Instruction at the bedside, affording an opportunity to follow the progress of cases, will be given to the fourth-year men in sections by the head of the department, and so far as possible, individual cases will be assigned to each student for study, maintenance of records, etc.

Section Work in the College Dispensary.—Men in the fourth year will be given instruction in the Dispensary similar to that offered in the wards.

Recitations.—Recitations once a week will be given to the fourth-year men throughout the year. These recitations will include quizzes on the subject matter of the didactic and clinical lectures, and such subjects as are best adapted to this mode of instruction.

SUMMARY.

	<i>Fourth Year.</i>
Lectures	48 hours.
Clinics	32 hours.
Sections	12 hours.

SPECIAL DEPARTMENTS OF MEDICINE AND SURGERY.

NERVOUS DISEASES.

CHARLES L. DANA, M.D., *Professor of Clinical Medicine, Department of
Diseases of the Nervous System.*

Lecturer,
JOSEPH FRAENKEL, M.D.

Instructors,
J. RAMSAY HUNT, M.D., ROBERT M. DALEY, M.D.

The regular work consists of a preliminary series of lectures by Professor Dana, in which the general outline of the work for the year is given, with demonstrations of the general anatomy, general symptomatology, and methods of examination of the nervous system. During the rest of the term clinical lectures on nervous diseases are held weekly in the amphitheatre of Bellevue Hospital or at the college. Section work is given weekly to classes in the wards of Bellevue Hospital, and four times a week in the dispensary of the college. In this dispensary, section-work instruction is given in history-taking in the examination of patients, and in electro-therapeutics. In addition a special course of lectures on practical phases of neurology is given by Dr. Joseph Fraenkel.

It is considered of the greatest importance that the student of nervous diseases be thoroughly grounded in the anatomy and physiology of the nervous system, therefore courses in gross and microscopical anatomy of the nervous system are provided in the histological laboratory. Special students can also take courses on the pathology of the nervous system.

Special instruction in electro-therapeutics is given by one of the instructors, and special hours are given to psycho-therapy at the Dispensary. Thus the course of instruction aims to provide the student before he graduates with instruction in the microscopical anatomy of the nervous system, in its physiology and pathology,

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and also with practical clinical instruction in the amphitheatre, at the bedside, and in the dispensary.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures	5 hours.	
Clinics	20 hours.	20 hours.
Sections	15 hours.	5 hours.

Text-book.—Dana, *Diseases of the Nervous System and Psychiatry.*

Collateral Reading.—Gower, *Diseases of the Brain and Spinal Cord*; works on nervous diseases by Dercum, Mills, Sachs, Starr, Church and Peterson; Obersteiner, *Anatomy of the Nervous System.*

PSYCHO-PATHOLOGY.

AUGUST HOCH, M.D., *Assistant Professor of Clinical Medicine, Department of Psycho-pathology.*

Clinical Instructors,

GEORGE H. KIRBY, M.D.,

C. MACP. CAMPBELL, M.D.

The course is to cover the principal data and methods of modern psycho-pathology, the diagnosis and legal commitment of the insane, and the medico-legal problems of insanity.

It consists of general lectures and clinics, each followed in a few days by a one-hour review of the topic of the clinical demonstration, and two lectures on the practical issues, commitments and medico-legal principles.

Three to four hours of optional section work may be given at Bellevue Hospital or in the college dispensary.

SUMMARY.

General lectures	7 hours.
Clinics	16 hours.
Reviews	8 hours.
Section work (optional).....	3-4 hours.

Reference-book.—Kraepelin, *Clinical Psychiatry.*

DISEASES OF CHILDREN.

JOSEPH E. WINTERS, M.D., *Professor of Clinical Medicine, Department of Diseases of Children.*

Clinical Instructors,

WILLIAM D. TYRRELL, M.D.,

WILLIAM SHANNON, M.D.

This department will embrace clinical instruction and section teaching in all the important diseases of infancy and childhood.

There will be one clinical lecture each week in the college building, and clinical lectures in the Willard Parker Hospital on scarlet fever and diphtheria.

In connection with the dispensary of the Children's Department in the college building there is an amphitheatre for section teaching, and isolation rooms for contagious diseases, so that students have ample opportunity for the personal study of disease.

Two hours each week will be devoted to section teaching in the dispensary to the students of the fourth year.

Students will be required to examine sick children and discuss the diagnosis and treatment of patients assigned to them.

Special attention is given to the hygiene and feeding of infants; the digestive disorders of infants; the dietetics of childhood and the food disorders of infancy and childhood; the anatomical and physiological peculiarities of infancy and childhood; and the influence these peculiarities have on the manifestations of disease in children.

One of the distinguishing features of this department will be the instruction of each student in the art of diagnosis by the professor in charge.

There will be practical bedside illustrations of the management, care, and therapeutics of all the acute diseases of infancy and childhood.

In the clinical laboratory microscopical examinations will be made of secretions and excretions, of lesions of the mouth and throat, and of sections of anatomical lesions of the important diseases of childhood.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Clinics	30 hours.	30 hours.
Sections		10 hours.

Text-books.—Holt, *Diseases of Infancy and Childhood*, fifth edition, 1909; Rotch, *Pediatrics*.

Collateral Reading.—Starr, *American Text-book on the Diseases of Children*; Welch and Schomberg, *Acute Contagious Diseases*.

GYNÆCOLOGY.

WILLIAM M. POLK, M.D., *Professor of Clinical Surgery, Department of Gynæcology.*

Instructors,

CHARLES C. BARROWS, M.D., GEORGE D. HAMLEN, M.D.,
GEORGE G. WARD, JR., M.D.

Instruction in gynæcology is given by recitations, lectures, ward and class-room demonstrations, clinics, and laboratory demonstrations.

Five Lectures, upon topics of special interest and importance to the subject as a whole, will be given during the fourth year.

Recitations are planned to cover the entire subject, and are held one hour a week during the fourth year of the course. In order that the instruction throughout the department may be as nearly in unison as possible, a synopsis of the subject-matter of each lesson is prepared by the instructor and amended and revised by the head of the department. This is presented to the student for comparison with his text-book, to which it is an addendum. This method insures the coöperation of the head of the department in the groundwork of his subject and enables him to keep in touch with each student until his graduation.

Class-room and Ward Demonstrations are given to sections of the fourth-year class twice a week throughout the year. This instruction includes the examination of patients by the students, who are thereby drilled in the methods of physical diagnosis as applied to the pelvis. When necessary the patients are anæsthetized.

The routine treatment appropriate to the various conditions found is demonstrated, the students assisting when possible. In this way, not only is familiarity acquired with normal conditions within the pelvis and the various departures from this state induced by disease, but opportunity is afforded to see and put in

actual practice measures of relief and to watch the subsequent course and treatment of these cases.

Operations are performed three days every week at which the several sections are enabled to study the detail of every operation peculiar to this department.

A General Clinic is held once a week at which students selected in rotation are required to examine the patient, make a diagnosis, and suggest treatment. They are questioned before the class upon all these topics, as they relate to the case in hand, so as to determine the correctness of their conclusions. Should operation be called for, it is then performed.

Laboratory Demonstrations of secretions, discharges, and specimens obtained from patients who come under observation during this course are made to sections of the third-year class as a part of the course in clinical pathology.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		6 hours.
Recitations		30 hours.
Clinics	30 hours.	30 hours.
Sections		20 hours.

Text-books.—Penrose, *Gynæcology*; Findley, *Diagnosis*.

Collateral Reading.—Dudley, *Gynæcology*; Garrigues, *Diseases of Women*.

DISEASES OF THE GENITO-URINARY ORGANS.

SAMUEL ALEXANDER, M.D., *Professor of Clinical Surgery, Department of Diseases of the Genito-urinary System.*

Clinical Instructors,

FRANCIS C. EDGERTON, M.D.. VICTOR C. THORNE, M.D.

The course is required of students during the third and fourth years, and is designed to give instruction in diagnosis and treatment of the surgical diseases of the male genital and urinary organs and syphilis.

Lectures.—One lecture a week from the opening of the term to the first of January will be given by Professor Alexander at the college, introductory to the clinical courses, and upon syphilis.

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Clinic.—A clinic will be given in the amphitheatre of Bellevue Hospital once each week after the first of January by Professor Alexander. At this clinic the principal operations upon the male urinary and genital organs will be performed before the class, and special attention will be given to the subject of diagnosis and post-operative management of cases. Attendance upon these clinics is required by students during the third and fourth years.

Section Teaching at the College Dispensary.—The third-year class will be divided into sections of small size, and instruction will be given by the Chief of Clinic and the instructors in the college dispensary. Special attention will be given in this course to the diagnosis and treatment of the venereal diseases and the use of special instruments.

The fourth-year class will be divided into sections of small size, and instruction will be given in the wards of Bellevue Hospital by Professor Alexander. This course will be devoted principally to the diseases of the urinary organs and to instruction in the use of special instruments and apparatus and the post-operative treatment of cases.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Clinics	18 hours.	18 hours.
Sections	15 hours.	10 hours.
Lectures		12 hours.

Text-books.—White and Martin; Keyes.

Collateral Reading.—Hyde and Montgomery; Keyes and Chetwood

DERMATOLOGY.

GEORGE T. ELLIOT, M.D., *Professor of Clinical Surgery, Department of Dermatology.*

JAMES C. JOHNSTON, M.D., *Assistant Professor of Clinical Surgery, Department of Dermatology.*

Clinical Instructor,

HANS J. SCHWARTZ, M.D.

Instruction in Dermatology will be given by the Clinical Professor and his assistants. No teaching will be given didactically, but the cutaneous diseases will be demonstrated on the living sub-

ject. Abundance of material for such instruction is obtainable, and the student can thoroughly familiarize himself with the more common as well as with the rarer diseases of the skin by actual personal contact and observation. Attention is particularly paid to the diagnosis and the etiology of skin diseases, but their therapeutics also receive due consideration.

SUMMARY.

Sections	<i>Fourth Year.</i> 25 hours.
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Text-books.—H. Stelwagon, *Diseases of the Skin*; J. Nevins Hyde, *Dermatology*.

LARYNGOLOGY AND RHINOLOGY.

JAMES E. NEWCOMB, M.D., *Assistant Professor of Clinical Surgery,*
Department of Laryngology and Rhinology.

Clinical Instructor,

FRANKLIN T. BURKE, M.D.,

Instruction in Laryngology and Rhinology is given by clinical lectures at the college by the Professor of the department. The subjects then considered are demonstrated to the fourth-year students by the instructor and by the assistants. The class is divided into sections, and each member is expected to examine patients and perform manipulations. The clinics are fully illustrated by plates and models, and, as far as possible, by clinical material.

SUMMARY.

Lectures	<i>Fourth Year.</i> 8 hours.
Sections	15 hours.

Text-book.—Knight, *Diseases of the Nose and Throat*.

Collateral Reading.—Grünwald, *Atlas of Diseases of the Larynx*; Grünwald, *Atlas of Diseases of the Mouth, Pharynx, and Nose*.

OPHTHALMOLOGY.

CHARLES STEDMAN BULL, M.D., *Professor of Clinical Surgery, Department of Ophthalmology.*

Clinical Instructors,

ROBERT G. REESE, M.D.,

J. HERBERT CLAIBORNE, M.D.

Instruction in Ophthalmology consists in lectures at the college building once a week, during the months of October, November,

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and December, and in sectional teaching two hours a week at the college dispensary throughout the year. The weekly lectures at the college are didactic, and consider the subjects of the external or superficial diseases of the eye, the anomalies of the ocular muscles, and the deep lesions of the eye which are not susceptible of clinical demonstration. The sectional teaching at the college dispensary is devoted partly to clinical ophthalmology and the use of the ophthalmoscope, and partly to instruction in the errors of refraction and the rudiments of the fitting of lenses. Thus the entire field of ophthalmology is covered.

SUMMARY.

	<i>Fourth Year.</i>
Clinics	10 hours.
Sections	20 hours.

Text-book.—De Schweinitz.

Collateral Reading.—Swanzy, Jackson, Nettleship, Berry, May, Fuchs.

OTOLOGY.

FREDERICK WHITING, M.D., *Professor of Clinical Surgery, Department of Otolaryngology.*

Clinical Instructor,
GEORGE B. McAULIFFE, M.D.

During the first third of the fourth year a systematic course of weekly lectures is given. These lectures are practical in character, including a consideration of the anatomy and physiology of the ear and the various methods of examination. Patients are shown to the class in order to familiarize the students with the symptoms and character of the more important diseases.

For clinical instruction in the dispensary, the fourth-year class is divided into sections. Each student receives practical instruction from Professor Whiting and his assistants in the examination of patients, the use of the otoscope, and the various methods of testing the hearing. The student is permitted to examine patients and, after a probationary period, to prescribe for them and thus gradually assume the duties of a clinical assistant. The students also have an opportunity of witnessing the more important operations in aural surgery, including intracranial complications, at the New York Eye and Ear Infirmary.

SUMMARY.

	<i>Fourth Year.</i>
Clinics	9 hours.
Sections	15 hours.

Text-book.—Bacon, *On the Ear*.

Collateral Reading.—Politzer, *Diseases of the Ear*; Macewen, *Pyogenic Infective Diseases of the Brain and Spinal Cord*; Whiting, *The Modern Mastoid Operation*.

ORTHOPÆDIC SURGERY.

NEWTON M. SHAFFER, M.D., *Professor of Clinical Surgery, Department of Orthopædic Surgery.*

Clinical Instructors,

JOHN JOSEPH NUTT, M.D., PERCY W. ROBERTS, M.D.

The course of study in the Orthopædic Department includes a stated clinical lecture once a week, with detailed demonstrations in sectional work twice a week during two months of the year.

During the regular clinical course especial attention is given to the early recognition of the deforming diseases of childhood, also to the symptomatology, pathology, and differential diagnosis of chronic and progressive deformities, including the mechanical and operative treatment.

In detail, the course consists of practical illustrations of methods of treatment, the apparatus used being thoroughly explained both in construction and in principle, attention being called to even minute points of construction and use. The operative side is fully dwelt upon, the indications for operative interference as an adjunct to the mechanical work being demonstrated. Ample clinical material is provided, and models of conventional forms of apparatus are placed at the disposal of students.

In the section and laboratory work the student is required to assist in the management of selected cases, to familiarize himself with the various methods of treatment, to construct the simpler forms of apparatus, to secure a practical knowledge of the details of construction of the more complicated instruments, and to famil-

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iarize himself with the pathological conditions existing in the deformities of childhood.

SUMMARY.

	<i>Fourth Year.</i>
Clinics	10 hours.
Sections	10 hours.
<i>Text-book.</i> —Bradford and Lovett.	

RADIOGRAPHY AND RADIO-THERAPY.

ALBERT C. GEYSER, M.D., *Instructor.*

This department is equipped with the most modern implements, coils, static machines, and high-frequency apparatus.

A large clinic furnishes abundant material for the demonstration of diagnosis, therapeutics, and the taking of radiographs. Students of the fourth-year class are taught in sections and given an opportunity to become thoroughly familiar with the various electrical agents.

SUMMARY.

	<i>Fourth Year.</i>
Sections	10 hours.

HYGIENE.

Lecturers,

JOHN C. TORREY, Ph.D.,

WALTER BENSEL, M.D.

Instruction in many of the branches of hygiene and preventive medicine is a prominent feature in some of the courses pursued in the several departments of Chemistry, Bacteriology, Pathology, and Medicine.

The topics thus covered include the chemical and bacterial analysis of air, water, milk; the preservation and adulteration of foods; and the general diagnosis, control, and prevention of infectious diseases.

The more distinctive branches of hygiene and preventive medicine are presented in a course of lectures to third- and fourth-year students. Some of the topics thus considered are:

- (1) The hygiene of dwellings, ventilation, sanitary plumbing,

lighting, water supply, disposal of sewage, school hygiene, and municipal sanitation. Dr. Bensen.

(2) The chemical problems relating to the collection, storage, and distribution of water supplies. Dr. Riggs.

(3) The relation of diseases of lower animals to those of man. Meat inspection. Milk inspection. Prof. Moore.

(4) Epidemiology, prophylaxis, and hygiene of transmissible diseases. Dr. Torrey.

Text-books.—Egbert, *Hygiene and Sanitation*; Bergey, *Text-book of Hygiene*; Notter, *Theory and Practice of Hygiene*.

MEDICAL JURISPRUDENCE.

R. A. WITTHAUS, M.D., *Professor of Medical Jurisprudence*.

This subject is covered in the regular course of study by several departments and by special lectures. The responsibilities of the physician towards the insane and their relatives and the general public, and the criminal aspects of the mentally defective are discussed by Professor Meyer. In the course on Obstetrics Professor Edgar takes up the moral and legal side of rape, feigned and unconscious pregnancy, what constitutes a "live birth," feigned or unconscious delivery, injury to the fœtus during precipitate labor, post-mortem delivery and the diagnosis of recent delivery. Professor Witthaus in the teaching of Toxicology discusses both its medical and medico-legal relations, and gives considerable attention to the "expert" witness and his rights and obligations, and advises as to how he should conduct himself. Dr. Schultze, in addition to his regular course in Gross Pathology, demonstrates medico-legal autopsies and cases of homicide, suicide, accident and abortion. The contractual relation between the physician and his patient as well as the recovery of compensation, and the liability for "damages," malpractice and privileged communications are fully discussed.

EXAMINATIONS.

REQUIREMENTS FOR ADVANCEMENT IN COURSE.

Students are advanced in course from one year to the next upon passing examinations in the work of that year, but examinations in major or minor subjects may, at the discretion of the Head of the Department, include all the work previously covered in the year or years preceding the examinations in question. There is, however, no unnecessary repetition of subjects taught from year to year. Students who have not succeeded in passing all their examinations will be allowed to enter upon the next year's studies, provided they pass examinations in the subjects failed in at the beginning of the session.

Examinations for advancement in course, graduation, and admission to advanced standing are held at the close of the year. In each laboratory course extending through a part of the year only, the examination is held at the close of the course.

Examinations for conditioned students and those desiring admission to advanced standing, who have not taken the spring examinations, are held during the week in which the college opens.

The subjects examined upon are divided into major and minor subjects, and a standing of 75 per cent. is required to pass.

The minor subjects embrace laboratory courses and those in which instruction is given by recitations only.

Subjects of Examination for Admission to the Second Year.

Major Subjects—Anatomy (except surgical anatomy).

Organic Chemistry (including laboratory work).

Minor Subjects—Histology.

Embryology.

Comparative Morphology.

Physiological Chemistry.

Physiology.

Conditions allowed (at the spring examinations): 1 Major and 1 Minor; or 2 Minor subjects.

NOTE 1.—In each of those branches in which recitations are held throughout the year, there shall be a written review conducted by the instructors and supervised by the professor in charge of the department, and also a final written review conducted by the professor himself at the close of the year. The written reviews conducted by the instructors shall be held as soon as possible after the return from the Christmas recess, and shall count as a single recitation, the object being to ascertain the knowledge acquired by the student.

NOTE 2.—*All conditions must be successfully passed before entrance into the next succeeding year will be allowed.*

Subjects of Examination for Admission to the Third Year.

Major Subjects—Anatomy (Surgical).

Physiology.

Pharmacology.

Pathology.

Minor Subjects—Medicine.

Surgery.

Obstetrics.

Bacteriology.

Conditions allowed: 1 Major and 1 Minor; or 2 Minor subjects.

(See Notes 1 and 2 above.)

Subjects of Examination for Admission to the Fourth Year.

Major Subjects—Materia Medica.

Pathology.

Minor Subjects—Obstetrics.

Medicine.

Surgery.

Toxicology.

Clinical Pathology.

Pediatrics.

Neurology.

Gross Pathology.

Conditions allowed: 1 Major and 1 Minor; or 2 Minor.

(See Notes 1 and 2 above.)

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Subjects of Examination for Graduation at the End of the Fourth Year.

Major Subjects—Medicine.

Surgery.

Therapeutics.

Obstetrics.

Gynæcology.

Minor Subjects—Hygiene.

Ophthalmology.

Neurology.

Laryngology and Rhinology.

Orthopædics.

Pediatrics.

Psycho-pathology.

Otology.

Dermatology.

Genito-urinary Diseases.

The examinations in the major subjects are allowed two hours, and in the minor subjects one hour each.

If any student fails to pass in not more than one major, or in two minor subjects, an examination may be allowed within two weeks, and if the candidate is then successful the degree will be conferred at the later Commencement at Ithaca.

If the candidate fails to pass in any subject at this second examination, the work of the fourth year must be repeated.

Requirements for Graduation.

1. Candidates for the degree of doctor of medicine must have studied medicine for four full years in an accredited medical college, and the fourth year at least must have been spent in the Cornell University Medical College.

2. Candidates must present satisfactory evidence of good moral character and of being not less than twenty-one years of age.

3. Candidates must file with the Secretary of the Faculty the requisite legal medical-student certificate as evidence of having complied with the requirements for admission.

4. Candidates must have dissected the whole cadaver at least twice (see page 38). They must, further, have taken the regular course of

two weeks in practical obstetrics, and a certificate covering this course must be filed at the Secretary's office before registration for the final examinations, which begin about the middle of May.

5. In addition to the yearly examinations above specified for advancement in course, candidates must pass at the end of the fourth year examinations in medicine, surgery, therapeutics, obstetrics and gynæcology, and the special branches which are specified on page 72.

6. Candidates rejected at the final examination will not be reexamined until after having repeated the fourth year of study.

Before being readmitted to the fourth year the candidate may be required to pass a satisfactory examination in anatomy physiology, chemistry and physics, and materia medica.

7. The degree will not be conferred upon any candidate who absents himself from the public Commencement without the special permission of the Faculty.

8. The Faculty reserves the right to terminate the connection of any student with the institution *at any time* on the ground of what they may deem moral or mental unfitness for the profession, or improper conduct while connected with the College.

Final Examination in the Subjects of the First and Second Years.

A recent law permits students to take part of their examinations for the license to practice medicine in this State at the end of the second year.

For full text of the law see page 24, this catalogue.

DIPLOMAS OF LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND MEMBERSHIP OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Graduates of the Cornell University Medical College are admitted to the final examinations for the diploma of Licentiate of the Royal College of Physicians of London and Membership of the Royal College of Surgeons of England, upon presenting proper certificates that certain conditions applicable to the foreign universities and colleges which are recognized by the examining board have been complied with.

Further information may be obtained from the Secretary of the Board (Mr. F. G. Hallet) at the Examination Hall, Victoria Embankment, London, W. C.

CORNELL UNIVERSITY MEDICAL COLLEGE.

Prizes.

I. For general efficiency.

In commemoration of John Metcalfe Polk, an Instructor in this College, who graduated from the Medical Department of Cornell University on June 7, 1899, and died on March 29, 1904, an annual prize of \$500 will be presented at each Commencement to the members of the Graduating Class who have completed the full course of study in Cornell University Medical College.

This prize will be awarded as follows:

To the student having the highest standing..... \$300

To the student having the second highest standing...\$125

To the student having the third highest standing.... \$75

II. For efficiency in Neurology.

Two prizes, one of \$50 and another of \$25, are offered by Professor Dana to the students of the graduating class, to be designated by him, who make the two best reports of neurological cases seen during the course.

III. For efficiency in Otolary.

Two prizes, the first of \$50, the second of \$25, are offered by Professor Whiting to the two students of the graduating class to be designated by him, who make the best records in the practical and theoretical work in otology.

Hospital Appointments.

The students and graduates of the Cornell University Medical College are expected to compete for positions on the resident staff of Bellevue and the other hospitals of the city.

Some of these hospitals are: The City, Harlem, Gouverneur, New York, St. Luke's, Presbyterian, St. Vincent's, St. Francis', Mount Sinai, German and Hudson Street hospitals, New York Eye and Ear Infirmary, and the hospitals in Brooklyn and Jersey City, Newark, Paterson, etc.

The requirements, the times of examination, and the period of service differ. The details can be learned by application, written or in person, to the superintendents or to the secretaries of the medical boards of the various hospitals.

ITHACA DIVISION



FACULTY OF MEDICINE AT ITHACA.

JACOB GOULD SCHURMAN, A.M., D.Sc., LL.D.,

President.

BURT GREEN WILDER, B.S., M.D.,

Professor of Neurology and Vertebrate Zoology.

SIMON HENRY GAGE, B.S.,

Professor of Histology and Embryology, Emeritus.

VERANUS ALVA MOORE, B.S., M.D.,

Professor of Comparative Pathology and Bacteriology.

WILLIAM RIDGELY ORNDORFF, A.B., Ph.D.,

Professor of Organic Chemistry.

ABRAM TUCKER KERR, B.S., M.D.,

Professor of Anatomy.

BENJAMIN FREEMAN KINGSBURY, Ph.D., M.D.,

Professor of Histology and Embryology.

SUTHERLAND SIMPSON, D.Sc., M.D.,

Professor of Physiology.

HUGH DANIEL REED, B.S., Ph.D.,

Assistant Professor of Neurology and Vertebrate Zoology.

SAMUEL HOWARD BURNETT, A.B., M.S., D.V.M.,

Assistant Professor of Comparative Pathology and Bacteriology.

ANDREW HUNTER, A.M., B.Sc., M.B., Ch.B.,

Assistant Professor of Biochemistry.

EUGENE BAKER, B.S., M.D.,

Assistant Professor of Obstetrics.

FACULTY OF MEDICINE AT ITHACA.

MARTIN BUEL TINKER, B.S., M.D.,

Assistant Professor of Surgery.

MELVIN DRESBACH, M.S., M.D.,

Assistant Professor of Pharmacology.

CHARLES PHILIP EMERSON, A.B., M.D.,

Assistant Professor of Medicine.

JOSEPH HENRY HATHAWAY, A.M., M.D.,

Instructor in Physical Diagnosis and Medical Examiner at the Gymnasium.

JACOB PARSONS SCHAEFFER, A.M., M.D.,

Instructor in Anatomy.

WILLIAM ATWOOD HILTON, B.S., Ph.D.,

Instructor in Histology and Embryology.

ROBERT D. SCHROCK, A.B.,

Instructor in Physiology and Pharmacology.

ALBERT HAZEN WRIGHT, A.B., A.M.,

Instructor in Neurology and Vertebrate Zoology.

ARTHUR AUGUSTUS ALLEN, A.B., A.M.,

Instructor in Neurology and Vertebrate Zoology.

EDSON HOYT NICHOLS, A.B.,

Instructor in Chemistry.

GEORGE CHARLES EMBODY, B.S., M.S.,

Instructor in Vertebrate Zoology and Neurology.

ELMER GEORGE PETERSON, B.S.,

Instructor in Bacteriology.

FLOYD ROBBINS WRIGHT, A.B., M.D.,

Demonstrator in Anatomy.

ALDIS ADELBERT JOHNSON, B.Ph.,

Assistant in Physiology and Pharmacology.

FACULTY OF MEDICINE AT ITHACA.

CHESTER HILLS WATERS, A.B.,

Assistant in Histology and Embryology.

THEODORE FLETCHER MEAD, A.B.,

Assistant in Histology and Embryology.

ASA CRAWFORD CHANDLER,

Assistant in Neurology.

SIDNEY WINTERS SHATTUCK, A.B.,

Assistant in Chemistry.

ALBERT CYRUS DURAND, A.B., M.D.,

Demonstrator of Anatomy.

HARRY WELDAY MAYES, B.S.,

Assistant in Physiology and Biochemistry.

HENRY RICHARD MULLER, A.B.,

Assistant in Biochemistry.

ABRAM T. KERR, B.S., M.D.,

Secretary of the Medical Faculty at Ithaca.

INSTRUCTION AT ITHACA.

DURING THE FIRST TWO YEARS OF THE COURSE.

CALENDAR FOR ITHACA.

First Term, 1909-1910.

September 28th, Tuesday.—Academic year begins; matriculation of new students; University scholarship examinations begin.

September 29th, Wednesday.—Matriculation of new students.

September 30th, Thursday.—Registration of matriculated students.

October 1st, Friday.—Instruction begins in all departments of the University at Ithaca. President's annual address to students at 12 M.

December 23d, Thursday.—Christmas recess begins.

January 6th, Wednesday.—Instruction resumed.

January 11th, Monday.—Founder's Day.

January 26th, Wednesday.—First term closes.

Second Term.

January 29th, Saturday.—Registration for the second term.

March 24, Thursday.—Instruction ends.

April 5th, Tuesday.—Instruction resumed.

June 16th, Thursday.—Instruction ends.

June 23d, Thursday.—Forty-first annual Commencement.

General Statement.

From its very foundation Cornell University has offered special courses for students preparing for the study of Medicine; first in the Natural History course, and later also in a special two-year Medical Preparatory course. In 1898 the Medical College was established in New York City with a four years' course. At the same time the work of the first two years was duplicated at the University in Ithaca, since many of the fundamental scientific subjects of which this part of the course mainly consists were already provided for

in the long-established departments of Botany, Zoölogy, Comparative Anatomy, Physics, Chemistry, Physiology, Histology, Embryology and Bacteriology. The courses in these departments were modified where necessary and additional courses were added so as to make the work at Ithaca fully equivalent to the first two years in New York City.

Among the facilities of the University of special value to the Medical College may be mentioned the museums of Vertebrate and Invertebrate Zoölogy, including Entomology and Comparative Anatomy, of Agriculture, of Botany, of Geology, and of Veterinary Medicine. The University Library, with its 365,000 bound volumes, 55,000 pamphlets, and over 2,000 current periodicals and transactions, is as freely open to medical students as to other University students.

Through the generosity of the late Dean Sage, of Albany, the University has been enabled to erect a building especially designed for anatomy, histology, embryology, and physiology. The building is constructed of Ohio sandstone. The general form is that of an E, 157 feet long and 50 feet wide, with wings 40 feet square.

In the cellar are the cold-storage, embalming, and cremating rooms and storerooms, and a large room forty feet square for aquaria, projection, etc.

In the basement are the ventilating and cold-storage machinery, a large lecture room, a recitation room, and an office for the departments of surgery, medicine and obstetrics, besides the lower part of the large amphitheatre.

On the first floor are located the cloak rooms for men and women, college office, library, reading room, faculty room, and private laboratory for histology, general laboratory for experimental physiology, demonstration, and dark room for physiology and the upper part of the large amphitheatre.

On the second floor is the department of histology, with a large general laboratory, a research laboratory, preparation rooms and private laboratories for the instructors. Upon this floor also is located the department of Physiology with a large general laboratory for biochemistry, a research laboratory for biochemistry, a research laboratory for experimental physiology, a metabolism room, an incubator room, repair room, and private laboratories for the instructors.

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The third floor consists of the general and special dissecting rooms, study rooms, and amphitheatre, besides rooms for the instructors.

The attic is utilized for photography, macerating the skeletons, and for storage.

The air in the building is constantly changed by forced ventilation. The lighting is especially good in all the rooms, as shown by the picture opposite page 75.

DEPARTMENTS, METHODS, AND FACILITIES.

ANATOMY.

ABRAM T. KERR, B.S., M.D., *Professor.*

JACOB PARSONS SCHAEFFER, A.M., M.D., *Instructor.*

FLOYD ROBINS WRIGHT, A.B., M.D., *Demonstrator.*

ALBERT CYRUS DURAND, A.B., M.D., *Demonstrator.*

Anatomy is given in both the first and second years and is mostly concentrated into the first term. This gives a large amount of continuous time for the subject, which consists mainly of practical work in the laboratory. Each student is independent of the others, and those with special training or ability are encouraged to do more than the required work. Personal quizzes and demonstrations are given upon each stage of the work. In addition to this, there are frequent recitations and demonstrations to small sections of the class. The students are encouraged to make careful notes and drawings of the conditions which they find in their specimens. To facilitate the drawings, outline record charts are furnished. Clay also is provided for modelling bones and other parts. The department is well equipped with models and special preparations. These are for use in the demonstrations and also for the personal use of students in the laboratory.

There is plenty of dissecting material, which is embalmed and kept in cold storage so as to be ready for use when needed. In the two years the student is required to make at least one complete satisfactory dissection of the human body. The work is distributed as follows:

In the first term of the first year twenty-five hours per week are given to Anatomy. A complete disarticulate skeleton is loaned to each student. The vertebræ and ribs and the bones of the upper extremity are studied first, and when these are finished the dissection of the upper extremity is begun. The study of the first part completed, the bones and then the soft parts of the head, except

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the brain, are considered. The lower extremity is studied in a similar manner.

In the second term of the first year the students attend demonstrations and recitations in which the work of the preceding term is reviewed and an attempt is made to locate the position and relation of structures studied upon the live body. The gross anatomy of the central nervous system is studied in the laboratory, and in correlation with the work in Histology and Physiology an elementary course of demonstrations on the gross anatomy of the viscera is given.

In the second year, first term, fifteen hours a week are devoted to the dissection and study of the thoracic and abdominal viscera. The dissection is accompanied by special recitations and demonstrations to small groups.

Those who satisfactorily complete the required work and others properly qualified may do advanced work.

1. Anatomy.—Laboratory work with section demonstrations and recitations. Twenty-five actual hours weekly. First term: (a) The upper extremity, 3 credits; (b) the head and neck, 4 credits; (c) the lower extremity, 3 credits. Course 1 is required of first year medical students. Drs. Kerr, Schaeffer, Wright, and Durand.

2. Anatomy.—Laboratory work with section demonstrations and recitations. Fifteen actual hours weekly. First term: (a) Abdominal and pelvic walls and viscera, $4\frac{1}{2}$ credits; (b) thoracic walls and viscera, $1\frac{1}{2}$ credits. Course 2 is required of second year medical students. Drs. Kerr, Schaeffer, Wright, and Durand.

3. Topographical and Regional Anatomy.—Section demonstrations and recitations. Five hours weekly. Elective. Second term. Dr. Wright.

4. Thoracic and Abdominal Viscera.—Section demonstrations. Two hours weekly. Required of first year students in Medicine. Second term: Credit 1 hour. Dr. Kerr.

5. Structure, Development, and Physiology of the Nervous System and the Organs of Sense.—Credit, 6 hours. First and second years. Professors Kerr, Kingsbury, and Simpson. The course consists of three parts: (a) Gross Anatomy, with special reference to Medicine and Surgery, Professor Kerr; (b) Histology and Devel-

opment, Professor Kingsbury; (c) Physiology, Professor Simpson. The instruction in each part consists of laboratory work, demonstrations or lectures, and recitations. The Gross Anatomy is given during the second term of the first year, the Histology and Development and the Physiology in the first term of the second year.

Each division counts 2 hours credit.

6. Advanced and Research Work.—Laboratory work. Elective. Eight or more actual hours per week. Professor Kerr and Instructors.

7. Anatomy of the Live Body.—Upper extremity, head and neck, and lower extremity. Two hours weekly, second term of the first year. Credit, 1 hour. Required of first year medical students. Dr. Schaeffer.

8. Anatomy of the Live Body, Thorax and Abdomen.—First term. Hours to be arranged. Elective. Dr. Schaeffer.

9. Anatomy Recitations.—Abdominal, pelvic, and thoracic viscera. First term. Hours to be arranged. Instructor ———

10. Anatomy Recitations.—Central nervous system. First term. Elective. Hours to be arranged. Instructor———.

HISTOLOGY AND EMBRYOLOGY.

B. F. KINGSBURY, Ph.D., M.D., *Professor.*

WILLIAM A. HILTON, Ph.D., *Instructor.*

THEODORE F. MEAD, A.B., *Assistant.*

C. H. WATERS, A.B., *Assistant.*

—————, *Assistant.*

As indicated by the following courses, this department offers elementary and advanced instruction in the theory and use of the microscope and its accessories, in photo-micrography, in vertebrate histology, and vertebrate embryology; and opportunities for research in all of these subjects.

The material equipment consists of a good supply of modern microscopes, while camera-lucidas, polariscopes, micro-spectroscopes, photo-micrographic cameras, microtomes and other special

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apparatus are in sufficient numbers to give each student opportunity for personally learning to use them, and for applying them to any special study in which they are called for. Two projection microscopes are available for class demonstrations and for making the drawings used in wax-plate reconstruction. The collection of histologic and embryologic specimens is extensive and constantly increasing.

The rooms for the use of the department are on the second floor of Stimson Hall. They are almost perfectly lighted and consist of a large general laboratory, an advanced laboratory, a preparation room, department office, and five private laboratories for the instructing staff, where also special demonstrations of difficult subjects are given to small groups of students.

The aim of the department is to bring the student into direct contact with the truths of nature, and hence, while there are demonstration lectures and conferences to give broad and general views, there is relatively a large amount of laboratory work in which the facts are learned at first hand, and the methods and manipulations necessary for acquiring the facts are practiced by each student. This lake region with its rich and varied fauna is especially favorable for investigation in the histology and embryology of all the main groups of vertebrates; and the proximity of the abattoirs in the city makes it possible to obtain material for the study of the development of the sheep, cow, and pig. The clinic and veterinary department supply material for the embryology of the cat and dog, so that the opportunities for research upon the development of animals are excellent. The collection of material and microscopic series of human embryology, contributed mainly by graduates of the college, is steadily growing. Every encouragement is given for the fullest utilization of these opportunities.

Courses Primarily for Undergraduates in the College of Arts and Sciences.

1. **The Tissues.**—The structure, origin and development of the tissues of the body. First term. Two lectures, recitations, or demonstrations, W., F., 11. Laboratory work, M., W., 2-4:30. Credit, 4 hours.

The beginning work of the course will be devoted to the use and

care of the microscope, while the application of special methods in the use of the instrument will be considered during the course. This course deals with the cell and the cellular origin of the body, and the structure and development of its component tissues.

There will be acquired a knowledge of the general histological methods, and each student will prepare or receive a series of typical preparations. Professor Kingsbury and assistants.

Course 1 is not open to Freshmen. It should be preceded or accompanied by work in physiology, zoölogy, or botany.

2. The Organs.—The structure and development of the physiological systems of the body and their component organs. Second term. Lectures, recitations, or demonstrations, W., F., 11. Laboratory work, M., W., 2-4:30.

This course is a continuation of course 1, and in it the same plan of work is followed. Courses 1 and 2 together give the fundamental facts of the microscopic structure and development of the body. Professor Kingsbury and assistants.

Course 2 must be preceded by course 1.

4. Embryology.—Second term. One lecture, demonstration or recitation, T., 8. Two laboratory periods, to be arranged. Credit, 3 hours.

A presentation of the facts and factors in the development of animals, with special reference to the vertebrate group. Professor Kingsbury and Instructor Hilton.

Course 4 must be preceded by courses 1 and 2 or their equivalent.

Courses Required of Medical Students.

10. The Histology of the Tissues.—First term. Credit, 3 University hours. Required of first year students of Medicine. Two laboratory periods and one lecture-demonstration, recitation or conference each week. The beginning work of the course is introductory, covering the microscope, its care and use, and the general microscopic methods. In conjunction with the histology is given the development of the body up to and including the establishment of the germ layers, together with the histogenesis. Professor Kingsbury and Mr. Mead.

11. Microscopic Organology.—Second term. Credit, 4 University

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hours. Required of first year students of Medicine. Two laboratory periods and two lecture-demonstrations, recitations or conferences each week. In this course the microscopic structure of the physiologic systems and organs is systematically covered. In conjunction with the histology is presented the development of the organs together with the implantation of the ovum, formation of the fetal membranes, placenta, etc. Professor Kingsbury and Mr. Mead.

5. Structure, Development, and Physiology of the Nervous System and the Organs of Sense.—Credit, 6 hours. First and second year. Professors Kerr, Kingsbury and Simpson. The course consists of three parts: (a) Gross Anatomy, with special reference to Medicine and Surgery, Professor Kerr; (b) Histology and Development, Professor Kingsbury; (c) Physiology, Professor Simpson. The instruction in each part consists of laboratory work, demonstrations or lectures, and recitations. The Gross Anatomy is given during the second term of the first year, the Histology and Development and the Physiology in the first term of the second year.

Each division counts 2 hours' credit.

Advanced Courses, Elective.

3. Special Histology and Technique.—First term. One recitation, demonstration or lecture, T., 8. Two laboratory periods afternoons by assignment. Credit, 3 hours.

In this course a more detailed knowledge of histology and facility in technique is gained by practical work in one or more of the fields of histological work.

Designed for those who desire a good working knowledge of histology for use in Biology or Medicine. Professor Kingsbury and Instructor Hilton.

Open to those who have had courses 1 and 2.

7. Advanced Work in Histology and Embryology.—First and second terms. Laboratory work, eight or more actual hours per week, with Seminary (course 8).

This course is designed for those preparing theses for baccalaureate or advanced degrees, and for those wishing to undertake

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special investigations in histology and embryology. Professor Kingsbury and Instructor Hilton.

Course 7 is open to those who have had courses 1, 2 and 3, or their equivalents. A good reading knowledge of French and German is indispensable for the most successful work in this course. It is suggested that those who intend to take this course confer with the head of the Department as early as possible, so that the work may be planned to the best advantage.

8. Seminary.—First and second terms. At an hour to be arranged. Credit, 1 hour per term.

For the discussion of current literature and the presentation of original work by the members of the Department staff and those doing advanced work in the Department. It may be taken in connection with course 3 or course 7.

VERTEBRATE ZOOLOGY AND NEUROLOGY.

BURT GREEN WILDER, B.S., M.D., *Professor.*

HUGH DANIEL REED, B.S., Ph.D., *Assistant Professor.*

ALBERT HAZEN WRIGHT, Ph.D., *Instructor.*

ARTHUR AUGUSTUS ALLEN, A.B., A.M., *Instructor.*

GEORGE CHARLES EMBODY, B.S., M.S., *Instructor.*

ASA CRAWFORD CHANDLER, *Assistant.*

8. Morphology of the Brain (lectures only).—Second term. Credit, 2 hours. Tuesday and Thursday at 11; if preferred, other days and hours may be arranged provided they accommodate such students as may elect the course. There are considered (a) the several types of vertebrate brain, beginning with that of the acanth shark (*Squalus acanthias*); (b) the value of the brain in classification; (c) the development and morphology of the human brain; (d) its resemblances and peculiarities, especially as compared with those of the apes; (e) the cerebral fissures as criteria of zoölogic or racial affinity, as indexes of physical or mental power, and as boundaries of functional areas. For illustration there are numerous diagrams representing actual preparations; the lectures are given in the room containing the neurologic division of the museum, about 1,600 specimens distributed as follows: Human adults and children, 430;

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embryonic, fetal and at birth, 218; apes and monkeys, 292; other mammals, 420; other vertebrates, 240. Members of the class should plan to remain during the hour following the lectures in order to examine the specimens more closely. Professor Wilder.

Course 8 must be preceded by course 1.

9. Comparative Anatomy of the Brain (practicums only).—Second term. Credit, 2 hours. Practicums at hours to be arranged. Beginning with the brain of the acanth shark, so far as possible the forms examined parallel and supplement those discussed in course 8. The actual dissections of mammalian brains are done upon those of the sheep and cat, but each student is enabled to study and draw prepared specimens from many groups, including monkeys, apes and man, fetal as well as adult. The neurologic division of the museum comprises about 1,600 specimens distributed as follows: Human adults and children, 430; human embryo, fetal and at birth, 218; apes and monkeys, 292; other mammals, 420; other vertebrates, 240. Professor Wilder and Mr. Chandler.

DEPARTMENT OF PHYSIOLOGY, BIOCHEMISTRY AND PHARMACOLOGY.

SUTHERLAND SIMPSON, M.D., D.Sc., *Professor of Physiology.*

ANDREW HUNTER, M.A., B.Sc., M.B., Ch.B., *Asst. Professor of Biochemistry.*

MELVIN DRESBACH, M.S., M.D., *Assistant Professor of Pharmacology.*

ROBERT D. SCHROCK, A.B., *Instructor in Physiology and Pharmacology.*

HENRY W. MAYES, *Assistant in Physiology and Biochemistry.*

A. A. JOHNSON, A.B., *Assistant in Physiology.*

HENRY B. MULLER, *Assistant in Biochemistry.*

Physiology.

The work in animal and human physiology is carried on by means of lectures, laboratory work, recitations, and demonstrations. In the laboratory the student is given the opportunity of carrying out for himself experiments which demonstrate the fundamental facts of the science, and he is taught to draw conclusions from these facts. The sections of the subject thus studied experi-

mentally include the physiology of the cell, muscle, nerve, heart and circulation, blood and lymph, respiration, animal heat, the special senses and the central nervous system. Special attention is given to experimental methods and to apparatus which are likely to be of practical importance in clinical medicine.

The recitations cover the entire field of physiology. Numerous special demonstrations are given in the laboratory to supplement those of the lecture course and the practical exercises. The systematic lectures, which are illustrated by experiments and demonstrations in the lecture room, are intended to bring the facts and theories of the science under review and to unify the work of the department. As occasion requires recitations or demonstrations may be substituted for lectures.

The physiology of the central nervous system and of the organs of the special senses will be studied in the second year after the student has had preparatory work in the anatomy and histology.

The following courses are offered:

1. Physiology of the Cell, Muscle, Nerve, Heart and Circulation, Blood and Lymph.—First term. Three lectures, demonstrations or recitations weekly. Three hours' credit. Required of first year medical students. Professor Simpson and Instructor Schrock.

2. Physiology of Respiration, Digestion, Excretion, Animal Heat, Special Senses (Elementary) and Reproduction.—The latter part of the course will be taken up with a review of the whole subject. Second term. Three lectures, demonstrations or recitations weekly. Three hours' credit. Required of first year medical students. Professor Simpson and Instructor Schrock.

4. Experimental Physiology.—Second term. Three three-hour laboratory periods per week. This course will be supplemented by one demonstration per week. Credit, 4 University hours. Required of first year medical students. Professor Simpson, Instructor Schrock, and Assistants Johnson and Mayes.

5. Structure, Development, and Physiology of the Nervous System and the Organs of Sense.—Credit, 6 hours. First and second years. Professors Kerr, Kingsbury and Simpson. The course consists of three parts: (a) Gross Anatomy, with special reference to Medicine and Surgery, Professor Kerr; (b) the Histology and

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Development, Professor Kingsbury; (c) Physiology, Professor Simpson. The instruction in each part consists of laboratory work, demonstrations or lectures and recitations. The Gross Anatomy is given during the second term of the first year, the Histology and Development and the Physiology during the first term of the second year.

7. Advanced Work and Research.—The laboratory is open daily from 8 A. M. until 6 P. M. Professor Simpson and assistants.

Biochemistry.

The work of this section lies within the following spheres:

The General Biochemistry of Animal Organisms, with Special Reference to the Biochemistry of Man.—Under this heading the student is taught the chemistry of the tissues, fluids, secretions and excretions of the human body; the composition of the foods, and the phenomena of their digestion, absorption and assimilation; the rôle of enzymes in the animal economy; the principles of nutrition; and the leading facts of special and general metabolism.

The Application of Chemistry to Clinical Medicine.—Instruction is given in the use of analytical methods for the examination of normal and pathological fluids and tissues, special attention being devoted to the quantitative analysis of the gastric contents, milk and urine.

The Elements of Toxicology.—The work in this subject includes a study of the constitution of some of the more common and more important poisons, and of the methods used for their isolation and detection. The greater part of the time available is spent on such mineral poisons, alkaloids, glucosides and coal-tar derivatives as are employed in therapeutics.

In each of the three provinces the work is done mainly in the laboratory. As occasion arises, the student's individual work is supplemented by experimental demonstrations; while by means of lectures and recitations it is sought to coördinate the whole, and to expound the theoretical aspects of the subjects.

The following courses are offered:

1. General Biochemistry.—Second term. Two lectures or recitations and six actual hours' laboratory work per week. Required of first year students of Medicine. Credit, 4 hours. Assistant Professor Hunter and Mr. Muller.

2. Clinical and Pathological Chemistry.—Second term. Three actual hours' laboratory work per week. Required of second year students of Medicine. Credit, 1 hour per week. Assistant Professor Hunter and Mr. Muller.

3. Toxicology.—Second term. Three actual hours' laboratory work. Credit, 1 hour. Required of first year students of Medicine. Assistant Professor Hunter and Mr. Muller.

6. Advanced Biochemistry and Research.—The laboratory is open daily to all qualified persons for advanced instruction or the prosecution of research. Daily throughout the year from 8 to 6. Assistant Professor Hunter.

Pharmacology.

Three sides of the subject of Pharmacology are taken up in a unified course consisting of Pharmacy, Materia Medica and Pharmacodynamics. This course will be given in the first and second terms and will include lectures, recitations and laboratory work. During the first term the subdivisions of Pharmacology will be considered and the relation of the work to other subjects of the curriculum will be defined. The subject of the characters, solubilities and the important tests of the active principles of drugs is studied in the laboratory, the work of which is supplemented and coördinated by recitations and demonstrations. In the laboratory practice opportunity is given for the student to familiarize himself with the more important crude drugs and the methods of extracting their active constituents. In connection with this work certain types of pharmaceutic compounds are made, the importance of incompatibilities is emphasized and illustrated, and prescription writing is begun.

During the second term the subjects of Materia Medica proper and Pharmacodynamics are taken up. The aim again is that of unification of classroom, lecture and laboratory work. The sources of drugs, together with their chemical and physical characters,

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active principles and dosage, are taken up more in detail and the prescription form is reviewed and practice given therein. Ample opportunity is given for observation of the effects of important drugs upon living tissues, the student making graphic records of the physiologic action of drugs where that is possible. The results are then collected and discussed. The aim of the entire course is to enable the student to get a comprehensive knowledge of medicinal agents without sacrificing a clear understanding of the important ones.

Advanced work in Pharmacology is encouraged, the laboratory being open to any who are prepared to do the work in this field.

1. Pharmaceutic Practice and Prescription Writing.—In sections. Four hours' laboratory work (or demonstrations) and one recitation weekly. Credit, 2 hours. Second year. First term. Assistant Professor Dresbach.

2. Materia Medica and Pharmacodynamics.—Six hours' laboratory work (or demonstrations) and one recitation weekly, and an additional recitation for one-half of the term. In sections. Second year. Second term. Assistant Professor Dresbach and assistants.

3. Research Work and Special Pharmacology.—This may consist of (a) selected experiments upon the action of drugs, or (b) research along special lines. Five or more hours per week. Assistant Professor Dresbach.

CHEMISTRY.

WILLIAM RIDGELY ORONDORFF, A.B., Ph.D.,
Professor of Organic Chemistry.

EDSON HOYT NICHOLS, A.B.,
Instructor in Chemistry.

SIDNEY WINTERS SHATTUCK, A.B.,
Assistant in Chemistry.

Assistant in Chemistry.

Organic Chemistry, or the Chemistry of the Compounds of Carbon.—In this course the study of the typical compounds of carbon, their properties, reactions, and relations to one another, is taken

up, especial attention being given to those organic substances that are of physiological importance. The course consists of lectures, recitations, supplemented by frequent written examinations and laboratory work. The lectures are fully illustrated by experiments, specimens of the compounds considered, and charts.

32. Elementary Organic Chemistry.—Three lectures, recitations, or written reviews, and three hours' laboratory work weekly. First half year. Credit, 4 hours. Mr. Nichols, Mr. Shattuck, and Mr. _____.

BACTERIOLOGY.

VERANUS ALVA MOORE, B.S., M.D., *Professor.*

SAMUEL HOWARD BURNETT, A.B., M.S., D.V.M., *Asst. Professor.*

ELMER GEORGE PETERSON, B.S., *Instructor.*

_____, *Assistant.*

The instruction in Bacteriology is given by means of lectures, recitations, and laboratory work. The bacteriological laboratories are well supplied with the best modern apparatus. The student will, under proper supervision, prepare culture media, make cultures, and study the morphology of bacteria in both the fresh (living) condition and in stained cover-glass preparations. In fact, all of the technique necessary for a practical working knowledge in bacteriology will be carefully covered. The more important species of pathogenic bacteria will be studied. The special methods which are necessary for diagnosing such diseases as tuberculosis, anthrax, glanders, and diphtheria will receive careful attention. Disinfection, sterilization, the means by which pathogenic bacteria are disseminated, protective inoculation, and other kindred subjects will be considered.

43. Bacteriology.—Two lectures and nine hours' laboratory work each week. Second half year. Required of second year medical students. Professor Moore and Instructor Peterson.

44. Research in Bacteriology.—Laboratory work with lectures and Seminary throughout the year. Professor Moore. The course is designed for those wishing to undertake original investigation in bacteriology preparatory to practical work in bacteriological

lines, such as exists in health department laboratories. This course is open to students who have taken course 43 or its equivalent in some other university. Elementary Chemistry and a reading knowledge of French and German are indispensable for successful work in this course.

GENERAL PATHOLOGY.

VERANUS ALVA MOORE, B.S., M.D., *Professor.*

SAMUEL HOWARD BURNETT, A.B., M.S., D.V.M., *Asst. Professor.*

_____, *Instructor.*

_____, *Assistant.*

The course in Pathology consists of lectures, recitations, and laboratory work in pathological histology, and laboratory work in gross pathology. About one-half of the laboratory time will be devoted to gross pathology. In this course it is expected that the student will become familiar with the terms used in morbid anatomy, together with a definite knowledge of the more important changes found in inflammation and the various forms of infiltrations and degenerations.

40. Pathology.—Two lectures or recitations and ten hours' laboratory work each week. First term. Professor Moore, Drs. Burnett and _____. This course is open to students who have had course 1 in Microscopy.

45. Research in Pathology.—Laboratory work throughout the year. Professor Moore and Dr. Burnett. This course is open to students who have taken course 40, and have taken or are taking course 43, or the equivalent in some other university.

SURGERY.

MARTIN BUEL TINKER, B.S., M.D., *Asst. Professor of Surgery.*

Four hours weekly, second half year, recitations, demonstrations and occasional lectures. The course is given to small sections, and is intended to familiarize the student with the principles of General Surgery and Surgical Pathology. Demonstrations and laboratory work are used whenever possible in teaching such subjects as

Surgical Bacteriology, including testing the effectiveness of various methods of skin disinfection, sterilization of instruments, dressings and materials; testing and using suture and ligature material; the use of anesthetics; the relative value of methods for arrest of hemorrhage, etc.; the histological changes in wound repair and the general principles of diagnosis and treatment of surgical diseases and injuries. Having in mind the present tendency of State and hospital boards to estimate a medical graduate's qualifications solely or chiefly by ability to pass written examinations, frequent written exercises are given. Recitations are adopted as the principal method of instruction, with the belief that for the average student information is best assimilated and retained when acquired by personal effort. Lectures are given whenever they seem likely to be helpful in supplementing other methods of instruction. About twenty-five hours will be devoted to surgical diagnosis.

1. Surgery.—Recitations, demonstrations or lectures. Four class exercises weekly in small sections. Dr. Tinker.

MEDICINE.

CHARLES PHILIP EMERSON, A.B., M.D., *Asst. Professor of Medicine.*

No didactic lectures are delivered, their place being taken by recitations from a standard text-book.

Recitations.—The study of Medicine proper is begun with systematic recitations from *Modern Medicine*, by Salinger and Kaltiger. In these recitations the nomenclature, etiology, pathology, and symptomatology of typical cases of diseases are considered, the question of treatment not being taken up until the Junior year in New York.

1. Medicine.—Three recitations weekly. Second half year. Required of second year students in Medicine. Dr. Emerson.

PHYSICAL DIAGNOSIS.

JOSEPH HENRY HATHAWAY, A.M., M.D., *Instr. in Physical Diagnosis.*

This work will be given in the first term of the second year. The class will be given a thorough drill in the methods of physical diagnosis. They will first study carefully the normal physical signs.

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The last part of the course will be devoted to a study of the abnormal signs and a comparison of these with the normal.

1. Physical Diagnosis.—Two three-hour periods in sections weekly during the first half year. Dr. Hathaway.

OBSTETRICS.

EUGENE BAKER, B.S., M.D., *Asst. Professor of Obstetrics.*

Instruction in Obstetrics consists mainly of recitations from a standard text-book, these recitations covering the anatomy of the internal genitalia and pelvis, ovulation, menstruation, signs of pregnancy, the physiology, mechanism, and clinical course of normal labor, and the care of mother and child during the puerperium. Whenever necessary, these recitations will be illustrated by plates, casts, and demonstrations upon the obstetric manikin, etc.

1. Obstetrics.—Three recitations weekly first half and two recitations weekly second half of the second half year. Required of second year students in Medicine. Dr. Baker.

SCHEDULE AND SUMMARIZED STATEMENT.

In this schedule the Counts or University hours are given on the following basis: One recitation or lecture weekly for one term or half year gives a credit of one; for laboratory work it requires two and one-half actual hours weekly for a term or half a year to secure a credit of one.

SCHEDULE OF REQUIRED COURSES.

FIRST YEAR.

First Term.

<i>Subject.</i>	<i>No. of Course.</i>	<i>Hours of Credit.</i>	<i>Actual Hours per Week.</i>
Anatomy	1	10	25
Physiology	1	3	3
Organic Chemistry	32	4	6
Histology	10	3	7
		—	—
		20	41

Second Term.

Histology	11	4	8
Physiology	2	3	3
Physiology	4	4	10
Biochemistry	1	4	8
Biochemistry	3	1	3
Anatomy	4	1	2
Anatomy	5	2	5
Anatomy	7	1	2
		—	—
		20	41

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SECOND YEAR.

First Term.

Anatomy	2	6	15
Histology	5	2	4
Physiology	5	2	2
Pharmacology	1	2	5
Physical Diagnosis	1	2	6
Pathology	40	6	12
		20	44

Second Term.

Medicine	1	3	3
Surgery	1	5	5
Obstetrics	1	2½	2½
Bacteriology	43	6	11
Pharmacology	2	3½	8
		20	29½

SUMMARY OF REQUIRED COURSES.

FIRST YEAR.

First Term.

1. Anatomy.—Laboratory work with section demonstrations and recitations. Twenty-five actual hours weekly. First term, (a) The upper extremity, 3 credits; (b) the head and neck, 4 credits; (c) the lower extremity, 3 credits. Drs. Kerr, Schaeffer, Wright, and Durand.

1. Physiology of the Cell, Muscle, Nerve, Heart and Circulation, Blood and Lymph.—Three lectures, demonstrations or recitations weekly. Three hours' credit. Professor Simpson.

32. Elementary Organic Chemistry.—Three hours, lectures, recitations or written reviews, and three hours' laboratory work weekly. Credit, 4 hours. Mr. Nichols, Mr. Shattuck, and Mr. ———.

10. The Histology of the Tissues.—Credit, 3 University hours. Two laboratory periods and one demonstration, recitation or conference each week. Professor Kingsbury, Mr. Mead, and——.

Second Term.

11. Microscopic Organology.—Credit, 4 University hours. Two laboratory periods and two lecture-demonstrations, recitations or conferences each week. Professor Kingsbury, Mr. Mead, and——.

2. Physiology of Respiration, Digestion, Excretion, Animal Heat, Special Senses (Elementary), and Reproduction.—The latter part of the course will be taken up with a review of the whole subject. Three lectures, demonstrations or recitations weekly. Three hours' credit. Professor Simpson and Instructor Schrock.

4. Experimental Physiology.—Three three-hour laboratory periods per week. This course will be supplemented by one demonstration per week. Credit, 4 University hours. Professor Simpson, Instructor Schrock, and Assistants Johnson and Mayes.

1. General Biochemistry.—Two lectures or recitations and six actual hours' laboratory work per week. Credit, 4 hours. Assistant Professor Hunter and Mr. Muller.

3. Toxicology.—Three actual hours' laboratory work. Credit, 1 hour. Assistant Professor Hunter and Mr. Muller.

4. Anatomy.—Thoracic and Abdominal Viscera. Section demonstrations. Two hours weekly. Credit, 1 hour. Dr. Kerr.

5. Structure of the Nervous System.—Credit, 2 hours. Professor Kerr. Gross Anatomy, with special reference to Medicine and Surgery. The instruction consists of laboratory work, demonstrations or lectures, and recitations.

7. Anatomy of the Live Body.—Upper extremity, head and neck, and lower extremity. Two hours weekly. Credit, 1 hour. Dr. Schaeffer.

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SECOND YEAR.

First Term.

2. Anatomy.—Laboratory work with section demonstrations and recitations. Fifteen actual hours weekly. (a) Abdominal and pelvic walls and viscera, $4\frac{1}{2}$ hours' credit; (b) thoracic walls and viscera, $1\frac{1}{2}$ hours' credit. Drs. Kerr, Schaeffer, Wright, and Durand.

5. Structure, Development and Physiology of the Nervous System and the Organs of Sense.—Credit, 4 hours. Professors Kingsbury and Simpson. The course consists of two parts: (a) Histology and Development, Professor Kingsbury; (b) Physiology, Professor Simpson. The instruction in each part consists of laboratory work, demonstrations or lectures, and recitations.

1. Pharmaceutic Practice and Prescription Writing.—In sections. Four hours' laboratory (or demonstrations) and one recitation weekly. Credit, 2 hours. Dr. Dresbach.

1. Physical Diagnosis.—Two three-hour periods weekly. In sections. Dr. Hathaway.

40. Pathology.—Two lectures or recitations and ten hours' laboratory work each week. Professor Moore, Dr. Burnett and ———.

Second Term.

1. Medicine.—Three recitations weekly. Dr. Emerson.

1. Surgery.—Recitations, demonstrations or lectures. Four class exercises weekly in small sections. Dr. Tinker.

1. Obstetrics.—Three recitations weekly first half and two recitations weekly second half of the term. Dr. Baker.

43. Bacteriology.—Two lectures and nine hours' laboratory work each week. Second half year. Professor Moore and Instructor Peterson.

2. Materia Medica and Pharmacodynamics.—Six hours' laboratory (or demonstrations) and one recitation weekly, and one additional for one-half of the term. In sections. Second year. Dr. Dresbach and assistants.

REQUIREMENTS FOR ADMISSION.

The following classes of candidates will be admitted to the Cornell University Medical College.

I. Graduates of approved colleges or scientific schools; or

II. Seniors in good standing in approved colleges or scientific schools upon condition that their faculty will permit them to substitute the first year in the Cornell University Medical College for the fourth year of their college course, and will confer upon them the bachelor's degree upon the satisfactory completion of the year's work; or

III. Persons who give evidence by examinations that they have acquired an equivalent education to that signified by a bachelor's degree, and training sufficient to enable them to profit by the instruction offered in the Medical College.

All candidates for admission to the Cornell University Medical College must have at least such knowledge of physics, inorganic chemistry and biology as may be obtained in college by a year's work in these subjects as indicated below.

Physics.—The candidate should have satisfactorily completed a year's work in Physics, comprising at least 90 hours of demonstration and class work, and also work in physical measurement consisting of at least 90 actual hours in the Laboratory.

Chemistry.—The candidate should have satisfactorily completed a year's work in Chemistry covering introductory inorganic chemistry, and the elements of qualitative and quantitative analysis. The inorganic chemistry should include at least 50 hours of class work, consisting either of recitations alone, or of recitations and experimental lectures, and not less than 80 actual hours of Laboratory practice. The course in qualitative analysis should comprise 20 hours of class work and about 90 actual hours of Laboratory work.

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It should include the detection of the more common acids and bases, and also the analysis of solid mixtures of a composition unknown to the student. The instruction in quantitative analysis should comprise 10 hours of class work and about 50 actual hours of Laboratory practice, and should include both volumetric and gravimetric determinations.

Biology.—The candidate should have satisfactorily completed a year's work in Biology (or Botany and Zoölogy) comprising at least 90 hours of demonstration and class work, at least 125 actual hours of Laboratory work. It is recommended that the zoölogical part of the work should include some instruction in Embryology.

THE COMBINED A.B. AND M.D. DEGREES.

It will be seen from Section II of the above that the two degrees, Bachelor of Arts and Doctor of Medicine, may be obtained in seven years. The first three years must be taken in the College of Arts and Sciences. The fourth year is the first year in the Medical College, and at the end of it the student receives the degree of A.B. The last three years are also taken entirely in the College of Medicine. In the first and second years of the course in Arts and Sciences certain subjects are prescribed, and the rest are elective as appears from the following rule:

Before a student may be registered as a Junior he must have completed sixty hours of work, which shall include in English and History six hours, in one or more languages other than English six hours, in Philosophy and Mathematics six hours, and in Physics, and Chemistry, Geology, Physical Geography, and the biologic sciences six hours, of which hours the student is required to take at least twelve, and advised to take more, in his freshman year. Each six hours may be entirely in one division (for example, Philosophy six hours), or partly in one and partly in another (for example, Philosophy three hours and Mathematics three hours).

For admission to the Medical College Physics, Chemistry and Biology are prescribed.

The requirements specified in the two preceding paragraphs are met in the following curriculum:

FIRST YEAR ARTS.

	<i>Course.</i>	<i>1st term.</i>	<i>2d term.</i>
English or History.....	—	3	3
*Foreign Language	—	3	3
Biology	—	5	5
‡Mathematics or Philosophy.....	—	3	3
Physics Lectures	1	4	—
§Physics Recitations	5	—	2
Physics Laboratory	10	—	2
		—	—
		18	18

*Students should have a reading knowledge of French and German.

‡Those who have Solid Geometry and Trigonometry should elect Philosophy.

§In place of course 5 students may elect two additional hours in course 10, but should notify the professor in charge.

SECOND YEAR ARTS.

	<i>Course.</i>	<i>1st term.</i>	<i>2d term.</i>
Chemistry, Inorganic	1	6	—
Chemical Analysis — Qualitative and Quantitative	6	—	5
*Elective		12	13
		—	—
		18	18

*Those who have not a reading knowledge of French and German should elect one or both of these languages. Students who elect Mathematics in their first year should take Philosophy in their second.

The rest of the work in the second year and the entire third year is elective. In regard to the elective work the secretary of the Medical College will be glad to confer with students in Arts and Sciences who later expect to enter the Medical College.

RESIDENCE AND REGISTRATION.

The college year is nine months long, extending from the last of September till about the middle of June, and is divided into two nearly equal terms. (For exact dates, see calendar on page 78.)

No credit is given for work done in absentia. For leave of ab-

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sence during the session, application should be made to the Secretary.

At the beginning of the term (September 28 and 29, 1909, and January 29, 1910) students must register with the University Registrar, in Morrill Hall. After registration with the University Registrar, they must register with the Secretary of the Medical College, in Stimson Hall.

EXAMINATIONS.

Students are advanced in course from one year to the next upon passing examinations upon the work of that year. The work of each year is considered final of itself. There is no unnecessary repetition of subjects taught from year to year. According to the usage of the other colleges, the University student found to be markedly deficient will be dropped from the College at the end of the term in which such deficiency is shown. In the case of a student so dropped, an application for re-admission will not be entertained until after the expiration of one term.

ADVANCEMENT FROM SECOND TO THIRD YEAR.

Upon the completion of the two years in Ithaca, the student must obtain from the Faculty a statement of all the work which he has done; and accompanying this statement must be a recommendation that he be allowed to register in the New York division of the Medical College. As a student is not advanced from one year to another in the New York division until all the work of the year is completed, a student from Ithaca cannot enter the third-year class in New York until the entire schedule of the first two years has been successfully completed. For removing any conditions, examinations are held at the beginning of the fall term, both in Ithaca and in New York City. The student is at liberty to take these examinations in Ithaca or in New York City. The examination on a subject in either place is final for that year. That is, the student will not be permitted to try an examination on a subject in Ithaca, and take advantage of the later date for the examination in New York to have a second examination on the same subject in the same autumn.

If a student is deficient in two or more subjects there is no ob-

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jection to his taking the examination in one or more subjects in Ithaca, and the remaining ones in New York, the same autumn.

MEDICAL SOCIETY.

The Cornell Medical Society is a student organization. At the meetings, papers prepared by the members are read, followed by general discussion. The aim is to give mutual aid in gaining general and special medical knowledge, facility in conducting the exercises of the meetings, and in presenting papers and discussions in a clear and forcible manner before an audience.

CHARGES FOR INSTRUCTION.

FIRST YEAR.

Matriculation	\$5.00
Tuition	150.00
Laboratory Fees	35.00
	\$190.00

SECOND YEAR.

Tuition	\$150.00
Laboratory Fees and Deposit.....	35.00
	\$185.00

To secure payment for breakage of instruments, apparatus, etc., each student is required to deposit with the treasurer \$10 for the first year and \$15 for the second year. These deposits less the amount charged for breakage will be returned at the end of each year.

BOARD AND ROOMS.

The cost of living in Ithaca, including board, room, fuel, and lights, varies from \$4 to \$10 per week. By the formation of clubs, students are sometimes able to reduce their expenses to \$3.50 per week for room and board, and occasionally to even less than that amount.

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There are no dormitories for men students, and only Sage College and Sage Cottage for women students.

The cost for board, rent of furnished room, fuel and lights, in Sage College and Sage College Cottage varies from \$5 to \$6.50 a week. A student occupying alone one of the best rooms pays \$6.50 a week. If two occupy such a room together, the price is \$5.75. Those occupying less desirable rooms, with two in a room, pay \$5 a week each. Both buildings are warmed by steam, lighted by electricity, and, in most cases, the sleeping apartment is separated from the study.

Letters of inquiry in regard to board and rooms at the Sage College and the Cottage should be addressed to Mr. G. F. Foote, Business Manager of Sage College, Ithaca, N. Y.

HOSPITAL APPOINTMENTS.

CLASS OF 1908.

Bellevue Hospital.

(SECOND DIVISION.)

Harold De Wolf (1st place).
Ernest S. Bishop, B.A.,
Arthur E. Hoag,
William Tomkins,
George Doremus Stilson,
Rodney Ralph Williams.

(FOURTH DIVISION.)

Leander Allison Newman (1st pl.)
John Francis McGrath,
Frederic James Farnell.

Presbyterian Hospital.

Harold E. Santee, A.B. (1st pl.),
Charles Roy Davis, A.B.,
Gaylord Willis Graves, A.B.

New York Hospital.

Louis Ballantine Chapman.

Hudson Street Hospital.

William Denton (1st place),
Harry Vanness Spaulding.

Saint Luke's Hospital.

Harry Clifton Luke.

Harlem Hospital.

Arthur Taylor Gillette,
George Mosher.

Fordham Hospital.

Silas Mercer Moorman, A.B. (1st place),
William Joseph Walker, A.B.

Lincoln Hospital.

Roy Baldwin Wynkoop (1st place),
James Allen Cooley.

*Methodist Episcopal Hospital,
Brooklyn, N. Y.*

Albert Mortimer Bell,
Morrison Foster Murray.

J. Hood Wright Hospital.

Leo Charles DuBois.

Mount Sinai Hospital.

Richard Hoffman (1st place),
Philip Liebling,
Jerome Zuckerman (externe),
Mark Cohn (externe).

German Hospital.

Max Marschark (1st place),
William F. Steinbugler.

St. Vincent's Hospital.

Wallace Krugler (1st place),
George Michael Lynch,
William Edward Hartigan.

City Hospital.

Paul O'Brien.

Washington Heights Hospital.

Benjamin Jablons.

*Randall's Island Hospital
for Children.*

Abraham Walzer,
Mark Liebert.

CORNELL UNIVERSITY MEDICAL COLLEGE.

Lebanon Hospital.

David Joseph (1st place).

Sydenham Hospital.

Morris J. Clurman, A.B.

Brooklyn German Hospital.

Milton Albert Lampert.

Brooklyn Jewish Hospital.

Harold Max Rabinowitz (1st place),

Leo Samson Schwartz,
Alexander Hyman Rubinowitz,
Abraham Zingher.

Orange Memorial Hospital.

Leon Harris.

Christ Hospital.

Harold William Brown,
Charles Joseph Vincent Redding.

Passaic General Hospital.

David Gootenberg (1st place).

Paterson General Hospital.

James Reid Mitchell, Jr., A.B.
John Philip Rohn, Jr.

*St. Michael's Hospital,
Newark, N. J.*

Charles Leo O'Neill, A.B.

City Hospital, Watertown, N. Y.

Phebe DuBois.

CORNELL MEDICAL ALUMNI SOCIETY.

AIMS.

"ARTICLE II. The aims of this Society shall be as follows:—(1) To further the interests of the Medical College and the interests of the University at large. (2) To further the interests, educational, professional and social, of the graduates of the Medical College. (3) To promote good fellowship among the graduates, and between the graduates and the undergraduates of the Medical College."

MEMBERSHIP.

"ARTICLE III., Section 1. All graduates of the Cornell University Medical College shall be considered members of this Society upon the payment of one dollar."

"ARTICE III., Section 2. There shall be an annual fee of one dollar, to be paid on or before the date of the annual business meeting."

OFFICERS.

"ARTICE IV., Section 1. The officers of this Society shall consist of a President, Vice-President, Secretary, and Treasurer. They shall be residents of New York City or vicinity during their term of office."

"Section 2. The term of office shall be one year."

COMMITTEES.

"ARTICLE V., Sections 1 and 3. The officers of this Society, and six additional members elected at the annual meeting, shall constitute the Executive Committee. This Committee shall receive reports from all other Committees, and shall initiate and supervise plans for fulfilling the purposes of this Society. The President shall act as chairman *ex-officio*."

CORNELL UNIVERSITY MEDICAL COLLEGE.

MEETINGS.

"ARTICLE VI., Section 1. There shall be an annual meeting for the election of officers and the transaction of other business, to be held at the College Building during December, the date to be appointed by the Executive Committee."

"Section 2. There shall be at least one social meeting a year, held during the fall term, to which the Faculty, graduates and undergraduates may be invited."

Address all communications to the
SECRETARY OF ALUMNI SOCIETY,
Cornell University Medical College,
First Ave. and 28th St.

CORNELL UNIVERSITY

COMPRISES THE FOLLOWING DEPARTMENTS:

The GRADUATE DEPARTMENT (Degrees A.M., Ph.D., etc.)

The COLLEGE OF ARTS AND SCIENCES (Degree A.B.)

The COLLEGE OF LAW (Degree LL.B.)

The MEDICAL COLLEGE* (Degree M.D.)

The NEW YORK STATE VETERINARY COLLEGE (Degree D.V.M.)

The COLLEGE OF AGRICULTURE (Degree B.S.A.)

The COLLEGE OF ARCHITECTURE (Degree B.Arch.)

The COLLEGE OF CIVIL ENGINEERING (Degree C.E.)

The SIBLEY COLLEGE OF MECHANICAL ENGINEERING AND MECHANIC ARTS (Degree M.E.)

*For copies of the University Register and for additional information,
apply to*

REGISTRAR, CORNELL UNIVERSITY,

Ithaca, N. Y.

*The full four-year course of the CORNELL UNIVERSITY MEDICAL COLLEGE is given in the City of New York; the work of the first and second years is also given at Ithaca; where it may be taken by men students, and where it must be taken by women students. Both men and women students take the last two years of the course in New York City. Special announcements of the Medical College and information of every kind regarding it will be furnished on application to

SECRETARY, Cornell University Medical College,
First Avenue and 28th Street, New York City.

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**CORNELL UNIVERSITY
MEDICAL COLLEGE**

**ANNOUNCEMENT
1910-1911**

NEW YORK CITY
PUBLISHED BY THE UNIVERSITY



CORNELL UNIVERSITY MEDICAL COLLEGE

CORNELL UNIVERSITY MEDICAL COLLEGE

ANNOUNCEMENT
1910-1911

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CALENDAR.

1910.

- Sept. 19. Monday—Examinations begin for admission to the first year of all departments of the University.
- Sept. 26. Monday—Examinations begin for conditioned students and for those applying for advanced standing in the medical department.
- Sept. 28. Wednesday—College opens.
- Nov. 8. Tuesday—Election day. Legal holiday.
- Nov. 24. Thursday—Thanksgiving recess begins.
- Nov. 28. Monday—Thanksgiving recess ends.
- Dec. 22. Thursday—Christmas recess begins.

1911.

- Jan. 3. Tuesday, 9 A.M.—Christmas recess ends.
- Feb. 22. Wednesday—Legal holiday.
- April 14. Friday—Easter recess begins.
- April 17. Monday, 9 A.M.—Easter recess ends.
- May 29. Monday—Examinations begin.
- June 14. Wednesday—Commencement.

All students must be registered at the secretary's office at the opening of the session in September. No student will be admitted after October 8th without special permission of the faculty. Immediately after registration the fees must be paid at the treasurer's office.

Men may take the first year in either New York or Ithaca. Women must take the first year at Ithaca. All students take the last three years in New York.

BOARD OF TRUSTEES.

The PRESIDENT of the University . . .	} <i>Ex-Officio</i>	Ithaca.
The GOVERNOR of New York State . . .		Albany.
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At the foundation of the Medical College the following resolution establishing a Medical College Council and determining its functions was adopted by the Board of Trustees of Cornell University:

Resolved, That for the purpose of making recommendations to the Board of Trustees or the Executive Committee in relation to the business management of the Medical College there be established, and there is hereby established, a Medical College Council which shall consist of seven members, to wit: the President of the University (who shall be *ex-officio* chairman), the Director of the Medical College, and three trustees to be elected by the Board of Trustees or the Executive Committee who shall be appointed, one for one year, one for two years, and one for three years, and their successors to be appointed for three years, and two members of the Faculty, to be elected by the Faculty, who shall be appointed, one for one year, and one for two years, and their successors to be appointed for two years, and that all appointments to fill vacancies be made for unexpired terms.

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THE LOOMIS LABORATORY

GENERAL STATEMENT.

The Medical Department of Cornell University was established in 1898. This undertaking, which had been contemplated by the Trustees for several years, was made possible by the gift to the University of a commodious and fully equipped building designed for medical instruction, and by the bestowal of funds for the generous maintenance of a large and vigorous school for higher education in medicine.

The Main College Building comprises a Medical School and Dispensary, with principal entrance on First Avenue, opposite Bellevue Hospital, and occupies the entire block between Twenty-seventh and Twenty-eighth Streets on First Avenue, extending back 100 feet, thus affording an available space of nearly 20,000 square feet on each of its seven floors. The building is designed in a severe style of Renaissance architecture, and is constructed of Indiana limestone and red brick.

The Loomis Laboratory (founded 1886 by the same munificent hand) serves the purpose of undergraduate instruction, in connection with the laboratories in the College building. It has also been reorganized as a research laboratory, and special departments have been established in bacteriology, physiological chemistry, experimental medicine, and pharmacology. Facilities are thus furnished to graduates in medicine who may desire to pursue further study or original research in the various departments of laboratory investigation.

The street railway cars on Twenty-eighth and Twenty-ninth Streets and on First Avenue pass the college building. The cars of the Metropolitan Street Railway Company transfer to the cross-town cars on Twenty-third and Thirty-fourth Streets which, at First Avenue, pass within five blocks of the College buildings. A convenient station of the Subway line is located at Twenty-eighth Street and Fourth Avenue. The nearest stations of the Manhattan Elevated Railroad are at Twenty-eighth Street on the Third Avenue line and at Twenty-third Street on the Second Avenue line.

CLINICAL FACILITIES.

The College Dispensary.—One-half of the College building is allotted to the Dispensary, in which ample provision has been made for the accommodation of the various clinical departments, of which there are thirteen, viz.: General Surgery, General Medicine, including the Diseases of the Heart and Lungs, Gynæcology, Diseases of Children, of the Nervous System, of the Genito-Urinary System, of the Skin, Eye, Ear, Nose and Throat, Orthopædic Surgery, Radiography, and Psycho-pathology.

Each department has been furnished with all the instruments and apparatus necessary for the examination and treatment of patients. A number of small amphitheatres are placed in the Dispensary, so that the clinical instruction provided by the curriculum can be carried on without interfering with the treatment of patients.

The attendance in the Dispensary averages about 400 patients daily, and annually includes 15,000 new patients, so that the clinical material is abundant and accessible.

Members of the Faculty of Cornell University Medical College hold appointments in the hospitals and dispensaries of the city, and are thus enabled to utilize for teaching purposes a great quantity and variety of clinical material. The most important and best of these hospitals are the Bellevue, New York, Presbyterian, City, St. Vincent's, Gouverneur, Hudson Street, Willard Parker and Reception Hospitals, and the New York Eye and Ear Infirmary. Others are utilized from time to time, as necessity or opportunity arises. The major part of the bedside and clinical instruction is, however, conducted in Bellevue Hospital, which is directly opposite the College.

This hospital has 900 beds and receives 24,000 patients annually. It contains an amphitheatre capable of seating 300 students, and also a number of small operating theatres, where section demonstrations in surgery and gynæcology are made before the class. Connected with the hospital is a hydropathic establishment, where students are shown the practical applications of baths, douches, massage, etc.

The following clinics are held throughout the session:

Gynæcology—Monday, 3 P. M.

Professor POLK.

Medicine—Friday, 3 P. M.

Professor THOMPSON.

Surgery—Wednesday and Thursday, 3 P. M.

Professors STIMSON, WOOLSEY, HARTWELL and ROGERS.

Genito-Urinary—Wednesday, 3 P. M., for the latter half of the term.

Professor ALEXANDER.

Neurology—Friday, 4 P. M.

Professor DANA.

REQUIREMENTS FOR ADMISSION.

The Faculty of the Cornell University Medical College after mature deliberation concluded in 1907 that the usual "high school" education so commonly accepted as sufficient preparation for the study of medicine is inadequate. They are of the opinion that candidates for admission to this profession should possess the liberal culture and general education implied by a college degree in Arts or Science. Furthermore the great advances of recent years in all the natural sciences have led to correspondingly great advances in the practice of medicine and surgery. As a result the usual four-year course in medicine has become so seriously overcrowded, that, if the teaching of medicine and surgery is to keep pace with the advance in knowledge, the strictly medical portion of the curriculum must be extended. It was deemed wise to accomplish this result by requiring that the fundamental branches of Chemistry, Physics, and Biology be pursued before admission to the Medical College. Since most Colleges granting degrees in Arts and Sciences are amply prepared to provide instruction in these fundamental subjects it is expected that the result may be accomplished by a standard of admission which shall require the baccalaureate degree or its equivalent. Without attempting to enter into a discussion of the relative advantages of the course in Science or Arts, the President and Trustees of Cornell University adopted the requirements advised by the Faculty of the Medical College for admission to the course leading to the degree of M.D., and since September, 1908, only the following classes of candidates are admitted to the Cornell University Medical College:

I. Graduates of approved colleges or scientific schools; or

II. Seniors in good standing in approved colleges or scientific

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schools upon condition that their faculty will permit them to substitute the first year in the Cornell University Medical College for the fourth year of their college course, and will confer upon them the bachelor's degree upon the satisfactory completion of the year's work; or

III. Persons who give evidence by examinations that they have acquired an equivalent education to that signified by a bachelor's degree, and training sufficient to enable them to profit by the instruction offered in the Medical College.

All candidates for admission to the Cornell University Medical College must have at least such knowledge of physics, inorganic chemistry and biology as may be obtained in college by a year's work in these subjects as indicated below.

Physics.—The candidate should have satisfactorily completed a year's work in Physics, comprising at least 90 hours of demonstration and class work, and also work in physical measurement consisting of at least 90 actual hours in the Laboratory.

Chemistry.—The candidate should have satisfactorily completed a year's work in introductory inorganic Chemistry, together with the elements of qualitative and quantitative analysis. The inorganic chemistry should include at least 50 hours of class work, consisting either of recitations alone, or of recitations and experimental lectures, and not less than 80 actual hours of Laboratory practice. The course in qualitative analysis should comprise 20 hours of class work and about 90 actual hours of Laboratory work. It should include the detection of the more common acids and bases, and also the analysis of solid mixtures of a composition unknown to the student. The instruction in quantitative analysis should comprise 10 hours of class work and about 50 actual hours of Laboratory practice, and should include both volumetric and gravimetric determinations.

Biology.—The candidate should have satisfactorily completed a year's work in Biology (or Botany and Zoölogy) comprising at least 90 hours of demonstration and class work, and at least 125 actual hours of Laboratory work. It is recommended that the zoölogical part of the work should include some instruction in Embryology and Histological Technique.

Physics, inorganic chemistry and the general subject of Biology

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occupy so important a relationship to the study of medicine that the Faculty urge as much time as possible in the preliminary education be devoted to them.

The Trustees felt that it was unfair to refuse the exceptional student of unusual abilities who has obtained independently an education equivalent to that implied by a degree from a college or scientific school, and there will therefore be examiners appointed from the faculties in the different colleges of Cornell University to determine the qualifications of such as may apply for admission under Rule III. of these requirements.

The committee in charge of the administration of this rule consists of the President of the University and the Deans of the Faculties of Arts and Sciences and of Medicine.

All applications and communications are to be addressed to the Secretary of the Medical College.

Inasmuch as all students of medicine in New York State are required by law to have previously had an adequate preliminary education, and as this preliminary education must be certified to as sufficient by the State Educational Department, it is advisable that applicants for admission send to the Secretary of the Medical College, at least a month before entering, their degrees or properly attested certificates of graduation from an approved college or scientific school, that the secretary may then obtain the requisite "medical student's certificate" from the State authorities.

ADMISSION TO ADVANCED STANDING.

Applicants for advanced standing must have already attended the requisite number of courses in an approved, regular medical college, and may be admitted to advanced standing in any of the four years in Cornell University Medical College on presentation of satisfactory evidence showing that he has met in full the entrance requirements, together with evidence of having completed unconditionally medical courses, both laboratory and didactic, equivalent in amount and character to those given in the Cornell University Medical College in the year or years prior to that to which admission is sought. He must also pass examinations in the subjects described on page 72 as already pursued by the class which he intends to enter.

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ADMISSION TO SPECIAL COURSES.

Graduates in medicine, or students who desire to pursue a special course without graduation, are admitted to registration as special students, after approval by the head of the department conducting the course. Such special courses do not count in any way as part of the four years' course required of candidates for the degree of doctor in medicine. Further information regarding such courses, fees, etc., may be obtained by addressing the Secretary of the Cornell University Medical College, First Avenue, 27th to 28th Street, New York.

REQUIREMENTS FOR LICENSE TO PRACTICE MEDICINE IN THE STATE OF NEW YORK.

Graduates of Cornell University are admitted unconditionally to the examinations for license to practice medicine in the State of New York. Further information as to the nature of the requirements of the New York State law regulating the practice of medicine may be obtained by consulting the Hand-book issued for gratuitous distribution by the New York State Education Department at Albany, N. Y.

All requirements for admission should be filed with the State Education Department at least one week before examination.

Examinations for license to practice medicine in this State will be held as follows:

	1911.	1912.	
Winter	Jan. 31-Feb. 3	Jan. 30-Feb. 2	
Spring	May 23-26	May 14-17	
Summer	June 27-30	June 25-28	
Autumn	Sept. 26-29	Sept. 17-20	
	1913.	1914.	1915.
Winter	Jan. 28-31	Jan. 27-30	May 25-28
Spring	May 20-23	May 19-22	June 29-July 1
Summer	June 24-27	June 23-26	Oct. 5-8
Autumn	Sept. 23-26	Sept. 22-25	Jan. 26-29

Places.

New York, Albany, Syracuse, Buffalo.

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CHARGES FOR INSTRUCTION.

First Year.

Registration*	\$5.00	
Tuition	150.00	
Laboratory fees	35.00	
	————	\$190.00

Second Year.

Tuition	\$150.00	
Laboratory fees	35.00	
	————	\$185.00

Third Year.

Tuition	\$150.00	
Laboratory fees	35.00	
	————	\$185.00

Fourth Year.

Tuition	\$150.00	
Laboratory fees	25.00	
Final Examination fee.....	25.00	
	————	\$200.00

Each student is required to pay to the clerk of the College the following amounts to cover breakage in the Laboratories and Dispensary departments:

1st year, Laboratory and Dispensary.....	\$10.00
2d year, Laboratory and Dispensary.....	15.00
3d year, Laboratory and Dispensary.....	10.00
4th year, Dispensary.....	5.00

These deposits, less the amount charged for breakage, will be returned at the end of each year.

Tickets must be taken out and paid for at the beginning of the session.

SPECIAL STUDENTS.

Special students, on the recommendation of the head of the department concerned, may be admitted to any of the courses of instruction offered in the College, or to any course of instruction especially provided, on the payment of a registration fee of five

*The registration fee is payable only once, on entrance.

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dollars and a tuition fee of twenty-five dollars. Special courses do not entitle the student to credit toward graduation. (See page 24.)

The final examination fee is payable on registering for graduation. All other fees are payable at the beginning of the term, but in special cases they may be paid semi-annually in advance. No rebate will be made in any case.

No remission of laboratory fees will be made because of previous instruction elsewhere in the subjects.

EXPENSES OF STUDENTS.

The following estimate of the annual expenses of a candidate for a degree in the Medical School is based on the statements of students:

	<i>Low.</i>	<i>Average.</i>	<i>Liberal.</i>
Tuition	\$190	\$190	\$190
College incidentals	20	26	30
Books	16	28	35
Room and board.....	227	275	350 up
Total	\$453	\$519	\$605

To these expenses should be added the cost of clothes, laundry and personal incidentals, which must vary with each individual.

GENERAL STATEMENT OF THE PLAN OF INSTRUCTION.

The function of a Medical Department in a University is primarily to produce practitioners of the art of medicine of the highest possible efficiency. Within a comparatively recent period, however, this definition has become capable of interpretation in a much broader sense in that the school must include among its students not only those whose life is to be spent in the treatment of disease, but those who intend to become teachers of this art or of the branches of natural science upon which the art depends, as well as those who will devote their energies to advancing these sciences by research and to work connected with the public service. The Medical Department of the University has therefore developed into a school whose students are to be prepared to become practitioners of medicine and surgery, teachers of these subjects and their subsidiary branches, and investigators of biological problems which pertain to human disease and "preventive medicine." To reach this ideal, and to relieve the Medical Department from instruction in subjects which belong to natural science in general and not strictly to the medical curriculum, it is necessary that the students should have received the best possible preliminary education, which must include the amount of physics, inorganic chemistry and general biology outlined in the requirements for admission. As these courses are now given in practically all colleges, it suffices to point out their necessity to every prospective student of medicine, and to require that they each be pursued for at least one year as ordinarily given in the college, and then the education preliminary to entering upon the medical course can be considered the best obtainable, though not necessarily the best possible. Some unusual individuals could, without doubt, by selecting studies, obtain a preparation for the medical school fully equivalent, if not superior, to that represented in the college course, and would, therefore, be very desirable candidates. Hence, to provide for such contingencies a committee consisting of the President of the University, the Dean of the

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College of Arts and Sciences and the Dean of the Medical School has been empowered to consider the claims of any applicant who has followed a course of studies which can fairly be considered as at least equivalent to the four years of ordinary college training. No instance of this has as yet, however, been encountered.

In arranging the course of study the subjects pertaining to pure rather than applied science are grouped in the first year of the medical course, those of the applied science in the second year, and the so-called practical subjects in the second, third and fourth years.

The fourth year of the medical curriculum is devoted largely to clinical instruction in the various aspects of medicine and surgery, with bedside instruction and ample opportunity for the careful study of medical cases by continuous service in the hospital wards. Some opportunity for elective courses is allowed but all students must take at least the minimum amount of the subjects which form the basis of the general practitioner's usefulness, and all are thus compelled to be prepared for successfully undergoing the usual competition for appointments as hospital internes, and for positions in the public service.

Custom and experience are in favor of a long summer vacation, and the utilization of the cool months alone for teaching. The Faculty have therefore decided on a period of thirty-two actual working weeks exclusive of the time occupied by holidays and examinations. This working period is divided into three terms, the first of eleven, the second of ten, and the third of eleven weeks. By this arrangement it is possible to obtain a certain degree of "concentration" in the teaching of those subjects in which that plan is advantageous, and it is thus also possible to introduce a proper sequence in the curriculum.

In the first year anatomy, histology, comparative morphology and organic and physiological chemistry occupy the entire first term. Anatomy, organology, exclusive of the central nervous system, organic chemistry with laboratory experiments, and embryology are placed in the second term. Applied and neurological anatomy, physiological chemistry, physiology, and applied anatomy complete the year.

In the second year the first term is occupied with neuro-histology, physiology, pharmacy, and the study of medicine; surgery

and obstetrics are begun by text-book recitations and conferences, and continued throughout the year.

In the second term the physiology of the nervous system is completed and the study of practical medicine is begun, with a course in physical diagnosis upon ambulatory cases. The study of pharmacy advances to a consideration of pharmaco-dynamics, which demonstrates the possible modifications of normal physiological processes by drugs and other means of therapeutics.

The afternoons of the third term are largely occupied by the course in bacteriology. In the mornings gross and histological pathology are begun. During this term the work in surgery is carried forward and surgical diagnosis upon ambulatory cases is begun.

In the third year the didactic work in medicine and surgery is carried forward by means of recitations or conferences throughout the year, with a course of lectures during the first term. In the first term of the third year general pathological histology is completed, and in the second term a portion of three mornings a week is devoted to special surgical pathology and the pathological histology of the nervous system. The subject of gross pathology is pursued throughout the year, carrying forward and accomplishing the work already begun in the latter part of the second year. The student is introduced to the method of performing autopsies for pathological diagnosis, the work being conducted in the laboratories of the College and in the City Morgue in connection with Bellevue Hospital. In the mornings of the second term the laboratory phases of medicine are demonstrated by an ample course in clinical pathology in which the methods are demonstrated in the laboratory and their application to the patient taught in the wards of Bellevue Hospital.

The pharmacological course of the preceding year is carried forward in the third year by a course of didactic and clinical lectures, accompanied by demonstrations in the wards of Bellevue Hospital, in which the principles of pharmaco-dynamics are applied to the human patient to demonstrate the effects of drugs and other therapeutic measures in accomplishing the relief and cure of disease. During the second and third terms recitations and conferences supplement the work of the lecture room and clinic.

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The clinical work is pursued throughout the year, the class being divided into small sections for diagnostic and clinical instruction in the wards of Bellevue and other hospitals and in the College dispensary. The course in obstetrics is completed during this year by means of clinical and didactic lectures, the observation of parturient patients in the wards of Bellevue and Manhattan Maternity Hospitals, and by section conferences in the hospital wards and with the manikin. Each student must, during the summer vacation, between the third and fourth years, pursue a course in practical obstetrics in which he comes into contact with, and personally delivers, at least six cases. The service in this course is ample, and as a rule the student handles several times the required number of cases.

The Faculty earnestly recommend that this maternity work be accomplished in the summer, preferably of the third year. If taken during the regular winter session much loss in other work may result. Those who for any proper reason cannot take this course as advised in the summer, might, however, succeed in obtaining the necessary cases during the winter by selecting odd hours when not engaged in section work, and by arrangement with the office to receive telephone calls.

Instruction in the more important specialties is begun in the third year by means of weekly clinical lectures by the professors of neurology and pediatrics, and both clinical lectures and section conferences in genito-urinary diseases during the second and third terms. In these same terms the study of gynæcology is begun by means of recitations and in the third term lectures in toxicology and a preliminary course in hygiene complete the work of the year.

The fourth year, as offered for the session of 1910-1911, will be devoted chiefly to the study of diagnosis and treatment of disease at the bedside, in the dispensary, and in clinics. There are as few lectures as are consistent with the proper exposition of the chief problems confronting the profession, and these are delivered at the outset of the term, in order that the student may become familiar as soon as possible with the facts which are to be taught practically. For example, to the Professor of Medicine ten didactic lectures are assigned. This proportion has to be exceeded somewhat in therapeutics, obstetrics, and the specialties, but many of

these lectures are illustrated by the presentation of typical cases and are really clinics. The clinical instruction in surgery is supplemented by an operative course in which the student performs upon the cadaver all the common operations. Particular attention is also given to the methods of making medical and surgical diagnoses, and in this connection constant use is made of the bacteriological and clinical laboratories, where the student examines specimens taken at the bedside during one exercise, and reports the results to the class at the next.

Hygiene and its application in the province of the physician and public health officer is taught by lectures supplemented by demonstrations of the plans and methods of the city health board.

The major part of the theoretical instruction, as in the previous years, is given by recitations in the subjects of medicine (including neurology), surgery (including orthopædic surgery and genito-urinary diseases), therapeutics and gynecology.

The instruction in the specialties, which is made the distinguishing feature of this final year, is begun with a few clinical lectures, and is continued by a course in the examination and treatment of dispensary patients by each student. Every one receives from fourteen to twenty-eight hours of this training (the number varies somewhat with the subject), and should become reasonably proficient in the use of instruments and the ability to make diagnoses and give relief. No attempt is made to produce experts, but each one before graduation must know enough about the specialized branches of medicine to be a competent general practitioner.

Every graduate of this medical school is expected to pursue the usual interne service in some hospital. Even with the system of electives, possible in all years and compulsory in the two last terms of the fourth year, the instruction in the main branches of the practitioner's work is continued to the end of the course to fit the student to successfully compete with those from other colleges for the interne's appointment. For without a hospital training no physician should attempt to practice or to teach, and no specialist can be worthy of the name who has not had the broad foundation that such an education ensures.

For the session of 1910-11 there will be introduced for the first time ward work in the wards of Bellevue Hospital. Each student

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being assigned to this work four hours daily for a period of five weeks. During this time the student is assigned for purposes of study a certain number of patients, and is enabled to become familiar with the history, diagnosis, therapeutics and progress of these cases. He is at all times under the supervision of the Professors of Medicine and Therapeutics with their corps of Clinical Professors and Instructors. It is intended that this course shall round out in a practical way the instruction in medicine and therapeutics of the preceding years.

DETAILS OF THE PLAN OF INSTRUCTION.

THE DEPARTMENT OF ANATOMY.

———, *Professor of Anatomy.*

GEORGE WOOLSEY, M.D., *Professor of Surgical Anatomy.*

IRVING S. HAYNES, *Professor of Applied Anatomy.*

JEREMIAH S. FERGUSON, M.D., *Assistant Professor of Histology.*

CHARLES R. STOCKARD, Ph.D., *Assistant Professor of Embryology and Experimental Morphology.*

ISRAEL STRAUSS, M.D., *Instructor in Gross and Microscopical Anatomy of the Nervous System.*

WESLEY M. BALDWIN, A.B., A.M., *Instructor in Anatomy.*

J. F. GUDERNATSCH, *Instructor in Embryology and Experimental Morphology.*

J. F. MCCLENDON, Ph.D., *Instructor in Histology.*

I. Experimental Morphology.

Structure of Man.—This course considers the structure of the various organs and systems of the human body in the light of their variations and plasticity. The organs of man are analyzed by comparison with the simpler ones of lower mammals and other vertebrates. The relationships of the parts of the organs and systems are also explained by numerous facts gathered from experimental morphological studies of lower vertebrates.

The chief aim is to instill into the student the idea that animal structures are constantly changing and varying, yet are so definite as to lend themselves to logical analysis.

The structure of the integument, muscles, skeleton, alimentary tract, respiratory organs, reproductive and excretory systems, and organs of special sense are demonstrated in the several vertebrate groups and compared with the systems in man. The student should have a previous knowledge of vertebrate comparative anatomy.

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Special direction is also given to those students wishing to investigate problems in experimental and comparative anatomy.

Laboratory, 40 hours (elective), and demonstration conferences, 22 hours (required).

Text-books.—Wiedersheim's *Comparative Anatomy and Bau des Menschen*, Wilder's *History of Man*, together with special works on the subject.

Assistant Professor Stockard and Mr. Gudernatsch.

II. Embryology.

The work in embryology presupposes a general course in the subject and embraces a brief review of karyokinesis in its various phases; fertilization with consideration of heredity; cleavage as represented in the several types of vertebrate eggs; the processes of gastrulation and formation of germ layers, and a more thorough study of the development of the organs and systems in the bird, pig, and human embryo.

Serial sections, transverse and sagittal, of embryos at various developmental stages are provided, and models are employed for illustration. The lectures and conferences are devoted to a discussion of the theories of development, and to a comparison of the phases in different groups of vertebrates with the embryology of man as the objective point. Special attention is devoted to those stages of development at which abnormalities, monsters and tumor-like inclusions are most likely to occur. The causes of such anomalies are considered in the light of experimental embryology. The student is directed in collateral reading on these topics.

Laboratory, 70 hours; lectures, 10 hours. Required in the middle term of the first year.

Text-books.—McMurrich, *The Development of the Human Body*, Hertwig's *Embryology of Man and Mammals*, and special works.

Assistant Professor Stockard and Mr. Gudernatsch.

III. Histology.

COURSE I. HISTOLOGICAL TECHNIQUE.—The structure and use of the microscope and the methods of preparation of tissue for examination are considered. Laboratory work. Elective.

COURSE II. HISTOLOGY.—All the primary tissues of the body, including the vascular and lymphatic systems, are systematically

studied both in the fresh condition and by means of stained sections. The methods of teasing and frozen sections will be used extensively and tissues studied with the aid of both dissecting and compound microscopes. Laboratory, recitations, and conferences, 9 hours weekly for 11 weeks. October to December. Required of all first year students.

COURSE III. SYSTEMATIC COLLATERAL READING.—The student is referred to classics and desirable current literature bearing upon the subjects considered in Course II and taught the use and application of literature in its relation to histological work. This course is optional for first or second year students. First year students will find the value of Course II much enhanced if taken in conjunction with this elective course. The time required is about 6 hours a week for 10 weeks, October to December.

COURSE IV. MICROSCOPICAL ANATOMY AND ORGANOLOGY.—The form and structure of all the thoracic and abdominal viscera and the special sense organs are systematically studied by means of anatomical demonstrations, the dissection of fresh material, and the histological study of the dissected organs and stained sections under the microscope. In addition to the sections prepared specially for the student the department has established a considerable collection of microscopical slides which are available for the illustration of special features and for advanced study. Laboratory and conferences, 9 hours weekly for 10 weeks, January to March. Required of all first year students.

COURSE V. ADVANCED WORK AND RESEARCH.—Each student receives individual attention in the laboratory. The more apt and proficient are thus enabled to advance rapidly through the work of the preliminary courses. Such students, who have satisfactorily completed Courses I, II and III, are at liberty to elect Course V, in which they will pursue such subjects as may have proved of special individual interest, and, if sufficiently proficient, topics for research will be suggested. This course is elective to all students who have completed the necessary preliminary work and who are in possession of a reading knowledge of French and German. Those who have had advanced biological training may elect this work at the

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beginning of the first year course. The student who elects this course is expected to devote to it at least 6 hours weekly.

Text-book—Ferguson's *Histology and Microscopical Anatomy*.
Assistant Professor Ferguson and Dr. McClendon.

IV. Descriptive Anatomy.

This is taught by means of laboratory exercises held in the dissecting room at stated hours.

The following are the courses required:

COURSE I. THE UPPER EXTREMITY.

COURSE II. THE HEAD AND NECK.

COURSE III. THE LOWER EXTREMITY.

COURSE IV. THE THORAX.

COURSE V. THE ABDOMEN AND PELVIS.

The required work in each of the above courses includes:

(a) Dissection of the part.

(b) Demonstrations, study, and recitations upon dissected and prepared specimens, and from a standard text-book.

(c) Daily quizzes and recitations upon the work of the day during the entire period of each course.

(d) An oral examination at the completion of each course.

Total laboratory hours, 255 (minimum). First and second terms of the first year.

COURSE VI. A DEMONSTRATION COURSE. Optional for the first year students. Demonstrations upon the cadaver, models and dissected preparations, amplifying the courses in dissection during the first and second terms of the first year.

COURSE VII. STUDY ROOM COURSE IN LIVE ANATOMY.

Since the ultimate aim of dissection is to acquaint the student not merely with the arrangement of structures in the cadaver, but with the facts of the living body, this course follows as a natural sequence to the work of the dissecting room. In it through the study of living models and of one's own body there is a practical and a most essential correlation of the facts ascertained in the dissecting room with the features of the living body as they are presented to the eye and to the touch. Optional to first year students.

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COURSE VIII. REVIEW COURSE.

A thorough review of theoretical anatomy by means of weekly quizzes and recitations.

Required for second year students.

COURSE IX. DISSECTION REVIEW.

The work covers a repetition of courses 1-5, giving an opportunity for advanced dissection. Optional to students of the second, third, or fourth year. Afternoons.

COURSE X. A STUDY ROOM COURSE ON THE ANATOMY OF THE INFANT.

COURSE XI. BRIEF COURSE IN DISSECTION, DESIGNED SPECIALLY FOR DENTAL STUDENTS.

COURSE XII. A COURSE IN DISSECTION FOR SPECIAL STUDENTS.

Text-books.—Cunningham's *Manual of Practical Anatomy*, two vols.; Cunningham's *Text-book of Anatomy*. Spalteholz' *Atlas of Human Anatomy*.

Professor Haynes and Mr. Baldwin.

V. Neuro-Anatomy and Neuro-Histology.

(a) The course for first year students. This is given in the third term of the first year. It consists of a practical course upon the gross anatomy of the brain, conducted in the laboratory by means of dissections of the human brain, a study of prepared specimens, sections, and models, with demonstrations and recitations.

Laboratory, 22 hours.

(b) In the first term of the second year the histology of the central nervous system, together with the fibre-tracts and the nuclei, are studied. In connection with this course lectures and demonstrations upon the physiology of the central nervous system are given in conjunction with the department of physiology.

Laboratory, 44 hours.

Dr. Strauss.

VI. Applied and Topographical Anatomy.

This course is given during the third term of the first year. It is conducted as a laboratory exercise together with recitations assigned from a standard text-book on applied anatomy. The students will study dissected and prepared specimens showing the anatomy of the various regions and upon these, and the whole sub-

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ject, will demonstrate the important facts of regional and topographical anatomy as applied to the practice of medicine and surgery. Laboratory, 66 hours.

Text-book.—Woolsey's *Applied Surgical Anatomy*.

Professor Haynes.

VII. Elective Courses Preparatory to the Specialties.

Optional for students of the third and fourth years. These courses offer a thorough review of the embryology, histology and gross anatomy of the following organs and systems:

(a) The eye.

(b) The ear.

(c) The face and neck, including especially the nose and accessory sinuses, the mouth and salivary glands, pharynx and larynx, thyroid and parathyroid glands.

(d) The genito-urinary system, male and female.

(e) The brain and spinal cord.

(f) The thorax and abdomen.

(g) The extremities, especially the joints and their mechanics.

Laboratory, 40 hours.

Professors Haynes, Ferguson and Mr. Baldwin.

VIII. Anatomical Research.

To students desiring to pursue research in anatomical subjects the equipment of the entire department is available. Heads of sub-departments will gladly assign subjects and direct the progress of advanced work of this type. The course may be elected by students who enter with advanced credits, or by any student who has completed the preliminary courses in descriptive anatomy, histology and embryology. The course is also open to graduates in medicine or biology.

Professors Haynes, Ferguson, Stockard and instructors.

PHYSIOLOGY.

GRAHAM LUSK, Ph.D., ScD., *Professor of Physiology*.

JOHN R. MURLIN, Ph.D., *Assistant Professor*.

JAMES R. GREER, Ph.D., HORATIO B. WILLIAMS, M.D., J. A. RICHE,
Assistants.

Instruction in physiology begins with the students of the first year during the third term of that year. The object of this pre-

liminary course is to furnish a sound foundation upon which to base the systematic instruction of the second year. The work of the first year consists in the demonstration of the fundamental experiments in physiology, recitations and personal instruction. The laboratory course of this year commences with a study of the physiology of the free living cell and passes upward to the physiology of nerve and muscle and of the central nervous system.

The larger part of the course in physiology is given during the first half of the second year. There is a daily lecture. Following this, during three morning periods of three hours each, the student is in the laboratory and executes for himself the more important experiments concerned with animal and human physiology. The phenomena of secretion, circulation, respiration, metabolism, the special senses, and psychic relations are also taken up experimentally. Each student is examined before he leaves the laboratory for the day, in order to make sure that he understands what he has been doing.

One written and two oral recitations are held weekly. There is also a weekly conference at which the student may present in abstract form the contents of some classical paper on a great discovery in physiology, or the review of a recently published article of physiological import. The student is encouraged to use the library as he does the laboratory, since both are essential to correct thinking. A knowledge of French and especially of German is desirable in this connection.

Research workers who will give half or the whole of their day will be welcomed in the laboratory and granted every facility.

SUMMARY.

	<i>First Year.</i>	<i>Second Year.</i>
Lectures		96 hours.
Recitations		48 hours.
Laboratory	66 hours.	144 hours.

Text-books.—Howell's or Tigerstedt's (English or German) *Physiology*; Lusk, *Science of Nutrition*.

Collateral Reading.—Scientific journals.

CHEMISTRY AND TOXICOLOGY.

RUDOLPH A. WITTHAUS, M.D., *Professor of Chemistry, Toxicology and Medical Jurisprudence.*

CHARLES G. L. WOLF, M.D., *Assistant Professor of Chemistry.*

LOUIS W. RIGGS, Ph.D., *Instructor.*

The instruction in chemistry is concentrated in the first year, and is arranged upon the assumption that the student is already thoroughly grounded in the principles of chemistry and in physical chemistry. The object aimed at is not to produce analysts, but to impart that fundamental knowledge of organic and physiological chemistry which is necessary to the comprehension of the bearings of chemistry upon medicine.

Lectures.—There will be two lectures weekly during the first and second terms upon organic chemistry. The subject will be discussed to an extent sufficient to impart a knowledge of the principles of combination and reactions of the carbon compounds, and the properties and relationships of those which are of physiological, toxicological or therapeutical interest.

During the third year two lectures will be given weekly on toxicology for eleven weeks. In these lectures the medical and medico-legal bearings of the subject will be chiefly considered. This course will include the outlines of Medical Jurisprudence, i.e., the legal regulation of the practice of medicine, and the rights and obligations of physicians and surgeons under the law.

Recitations.—There will be one recitation weekly during the first and second terms, and two weekly during the third. While the subjects of these recitations will be assigned from a text-book, they will also follow the lectures closely, and will be in review thereof.

Laboratory Work.—During the second term there will be two two-hour sessions weekly in organic chemistry. An extended course in this subject is obviously impossible in so brief a period. This work will therefore be directed mainly to an amplification of the lectures and recitations on those points in which laboratory manipulations are desirable.

During the third term there will be three three-hour laboratory

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sessions in physiological and clinical chemistry. This course will include the study of the reactions of the carbohydrates, fats and proteins; of the composition of the salivary, gastric, pancreatic and intestinal secretions and the bile, and their actions in digestion; of the fæces, urine, blood and milk; and of the examination of pathological fluids, concretions, stomach contents, etc. The study of metabolism will receive particular attention. The arrangement of this course is in coaptation with those in physiology and in clinical pathology.

In the laboratory courses each student is supplied with all apparatus and chemicals required.

These courses are conducted by the instructors, under the direction of the Professor of Chemistry.

The laboratory will be open during "optional hours" to students of any year who desire to prosecute advanced work or research, subject to the regulations of the office.

SUMMARY.		1st Year.	3d Year.
Recitations		43	
Laboratory		139	
Lectures		42	22

Text-books.—Witthaus, *Manual of Chemistry*, sixth edition; Holleman, *Laboratory Manual*; Hawk, *Practical Physiological Chemistry*, second edition.

PHARMACOLOGY AND MATERIA MEDICA.

ROBERT ANTHONY HATCHER, Ph.G., M.D., *Professor of Pharmacology and Materia Medica.*

JACOB G. BRODY, M.D., *Instructor in Pharmacology.*

—————, *Instructor in Materia Medica.*

RICHARD WEIL, M.D., *Instructor in Pharmacology and Materia Medica.*

Work in this department is offered during the second year.

Materia Medica and Pharmacy.

I. Laboratory.—Four hours a week during the first trimester will be devoted to the consideration of crude drugs and their preparations. The Pharmacopœial preparations of the different pharmaceutical classes will be made by the students, and demonstrations and individual practice will be given in the more common incompatibil-

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ities to be avoided in prescriptions. Some of the demonstrations are intended to show the simplicity of certain processes often deemed difficult or impossible without special apparatus.

Each laboratory exercise will be preceded by an informal discussion of the work to be done.

II. Advanced Pharmacy, Elective.—A more extensive knowledge of Pharmacy than that given in the first trimester, although desirable, is not essential to the medical student. Opportunity will be afforded for extending the regular course and for the chemical examination of vegetable drugs.

Pharmacology.

III. Lectures.—During the second trimester forty-five hours will be devoted to lectures, conferences, and written reviews on Systematic Pharmacology. The lectures will be illustrated in part by demonstrations and by tracings taken from research experiments. Dr. Hatcher.

IV. Laboratory.—Concurrently with the lectures on Systematic Pharmacology ninety hours will be devoted to the laboratory study of the subject. The experiments are designed to illustrate a wide range of pharmacologic actions, the more important drugs being considered with reference to their actions on different structures. Professor Hatcher and Dr. Brody.

V. Research. Elective.—Students will be encouraged to conduct original research under the supervision of the several members of the staff. Such work affords a valuable insight into pharmacologic methods, and assists in the formation of a correct estimate of the original work of others.

SUMMARY.

	<i>Second Year.</i>
Lectures	35 hours.
Recitations	20 hours.
Laboratory	134 hours.

Text-book.—Sollmann, *A Text-book of Pharmacology.*

Collateral Reading.—Cushny, *Pharmacology and Therapeutics*; Schmiedeberg, *Pharmacologie*; Heinz, *Handbuch der experiment. Path. und Pharmacologie*; Kobert, *Lehrbuch der Intoxicationen*; Hatcher and Sollmann, *A Text-book of Materia Medica*; Coleman, *A Syllabus of Materia Medica*; Arny, *Principles of Pharmacy.*

APPLIED PHARMACOLOGY.

WARREN COLEMAN, M.D., *Professor of Clinical Medicine and Applied Pharmacology.*

EUGENE F. DUBOIS, M.D., *Instructor in Applied Pharmacology.*

SAMUEL MILBANK, *Instructor in Applied Pharmacology.*

Work in this department will be confined to the third year, and will consist of didactic lectures, clinical demonstrations of the actions of drugs and methods of treatment of disease without drugs, and recitations. The treatment of disease is considered from the standpoint of the remedy, and the course is intended to connect the pharmacology of drugs, considered in the second year, with the therapeutics of disease, which is more completely elaborated in the fourth year of the course.

Lectures.—One didactic lecture will be given each week throughout the year upon the actions of the more important drugs in disease and diseased conditions. Special attention will be devoted to practical considerations, such as the effects of different doses, time and methods of administration, side-actions, and the earliest evidences of toxic effects. Professor Coleman.

Clinical Demonstrations will be given in the wards of Bellevue Hospital, illustrating the therapeutic actions of such drugs as the patients may require. Blood-pressure observations and pulse-tracings will be made in appropriate cases. Demonstrations will also be given of the methods of employing counter-irritants, blisters, cups and the actual cautery; hydrotherapy, lavage of the stomach, cleansing and nutrient enemata, and colon irrigations; methods of resuscitation after submersion; massage and resistance movements. As opportunity offers, the operations of venesection, paracentesis, lumbar puncture, hypodermoclysis, and saline infusions will be demonstrated. Professor Coleman.

Recitations.—Twenty-one recitations will be held in the second and third trimesters upon the subjects covered in the lectures and clinical demonstrations. Dr. Milbank.

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SUMMARY.

	3d Year.
Lectures	32 hours.
Clinical demonstrations	42 hours.
Recitations	21 hours.

Text-books.—The text-books recommended in the departments Pharmacology and Therapeutics may be used.

MEDICINE.

W. GILMAN THOMPSON, M.D., *Professor of Medicine.*

Professors of Clinical Medicine,

ALEXANDER LAMBERT, M.D.,	CHARLES E. NAMMACK, M.D.,
LEWIS A. CONNER, M.D.,	C. N. BANCKER CAMAC, M.D.

Instructors and Assistants,

MONTGOMERY H. SICARD, M.D.,	HUGHES DAYTON, M.D.,
FREDERICK L. KEAYS, M.D.,	NATHANIEL R. NORTON, M.D.,
THEODORE B. BARRINGER, M.D.,	WALTER L. NILES, M.D.,
WILLIAM H. SHELDON, M.D.	

THOMAS WOOD HASTINGS, M.D., *Professor of Clinical Pathology.*

WILLIAM C. THRO, M.D., *Assistant Professor of Clinical Pathology.*

Instructors and Assistants,

JOHN W. COE, M.D.,	BERT R. HOOBLER, M.D.,
JOHN H. RICHARDS, M.D.,	THOMAS H. EVANS, M.D.

The **Course of Medicine** comprises a graded plan of study extending throughout three years. General didactic lectures upon the practice of medicine are almost wholly supplanted by bedside and dispensary instruction and systematic recitations from text-books. The course includes the following subdivisions:

Second Year:

(1) Recitations from a text-book upon medicine covering elementary topics with written reviews.

(2) Physical diagnosis of the heart and lungs, with systematic physical examination of the entire body in health and disease, and methods of recording observations.

Third Year:

1. Recitations from an advanced text-book, with written reviews.
2. Physical diagnosis continued.
3. History recording.

4. Bedside course in symptomatology.
5. Dispensary courses in general medicine.
6. Clinical pathology.
7. Twenty lectures on symptomatology.
8. Hospital medical clinics.

Fourth Year:

1. Advanced bedside study in symptomatology, diagnosis, and treatment, conducted while acting as clinical clerks in the wards of Bellevue Hospital.
2. Work in the Out-patient Clinic as clinical clerks.
3. Demonstrations of patients by the student before the class in the Out-patient Clinic.
4. Physical diagnosis.
5. Hospital medical diagnosis clinics.
6. Ten lectures upon diatheses, toxæmias, etc.
7. Elective advanced work in clinical diagnosis, clinical pathology, history recording, etc.

The details of the methods of instruction in medicine for each year of the curriculum are as follows:

SECOND YEAR.

Recitations.—Second year students begin the study of medicine with systematic recitations once each week throughout the year from an elementary text-book, in which the subjects of nomenclature, etiology, morbid anatomy, and typical symptoms are dwelt upon.

Physical Diagnosis.—This course covers 96 hours, and is conducted in the Out-patient Clinic in which the service is large and varied. Students are not only thoroughly instructed in the physical diagnosis of the heart and lungs, but are taught the systematic observation of the entire body in health and disease. They are familiarized with the use of instruments of precision and recording apparatus, and are assisted by the demonstration of models and diagrams.

THIRD YEAR.

Recitations.—Third year students recite twice each week from an advanced text-book on the Practice of Medicine, special em-

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phasis being given to symptomatology, complications, diagnosis, and treatment.

Written reviews are held at intervals to familiarize the student with examinations. All recitations are obligatory, and the recitation marks received form an important component of the final examination marks of the year.

Lectures.—A course of twenty-two lectures upon general symptomatology is given by the Professor of Medicine, which is designed as introductory to systematic bedside teaching.

General Medical Clinics.—Students of the third year are required to attend a clinic in medical diagnosis conducted by Professor Thompson, and the clinics in general therapeutics, as described for the fourth year. These clinics are held weekly in the amphitheatre of Bellevue Hospital.*

Medical Diagnosis is taught in sections in the Out-patient Clinic during two terms. Students are instructed in methods of history taking, and each student has opportunity personally to examine patients, record their symptoms and follow the effects of treatment suggested for them. The study of systematic physical diagnosis of the thoracic and other organs begun in the second year, is continued and applied to conditions of disease.

Ward Work.—During the last term of the year ward instruction is given to the class in sections at the bedside in Bellevue Hospital, under direction of the Professor of Medicine and in the New York Hospital under Professor Conner.

Examples of all the common diseases are studied, and the student has opportunity personally to examine many cases of disease in different stages of development, and of following their daily progress.

Clinical Pathology.—See below.

FOURTH YEAR.

The instruction in the fourth year hereafter given to students admitted to the College on the basis of graduation in arts and science will be most comprehensive and thorough, and will com-

*During the last term of the year they are also admitted to the Out-patient Clinic of the Professor of Medicine.

prise lectures, recitations, clinics in the hospitals and dispensaries, clinical clerkship, ward work, clinical laboratory exercises and a limited number of optional courses.

For the present session 1910-1911 the course will be offered as follows:

Bedside Instruction is given by the Professor of Medicine to sections not exceeding fifteen students, in the wards of the Presbyterian Hospital until January 1st, and in those of Bellevue Hospital thereafter, throughout the year. In these sections each student is assigned in turn to special cases for thorough study. Ward classes are also conducted by Professor Conner at the New York Hospital.

Clinics.—Medical clinics are held weekly in the amphitheatre of Bellevue Hospital by the Professor of Medicine. At these clinics students read written histories of cases which they have previously studied in the hospital wards. They are required to demonstrate their findings upon the patient, and are questioned before the entire class in regard to diagnosis and treatment. These clinics are also utilized by the Professor of Medicine to exhibit cases of exceptional rarity or difficult diagnosis, and a few of them are conducted in coöperation with the Professor of Surgery in order to present to the students the value of conjoint medical and surgical points of view in appropriate cases.

An out-patient clinic is also held weekly by the Professor of Medicine in the Dispensary of the College, at which students are given ample opportunity to examine patients and study minor ailments, as well as all the forms of disease in the ambulatory cases of a large and varied clinical service.

Dispensary Classes, comprising a dozen students each, are conducted in periods of five weeks for two hours twice a week. The students are taught methods of complete general physical examination, diagnosis, prognosis and treatment, and of history recording. Opportunity is afforded to follow the progress of cases from week to week, and to make clinical examinations of the sputum, blood, etc., in each case.

Lectures.—A course of ten lectures is given by the Professor of

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Medicine upon such general topics as the diatheses, toxæmias, auto-intoxication, cachexias, etc. Lectures are also given by Professor Conner upon the Internal Secretions, and Professor Camac upon (1) diabetes and allied conditions, and (2) the muscular and nervous systems of the heart clinically considered.

An elective course in advanced clinical pathology and diagnosis is offered in the fourth year.

Clinical Clerkships.—The service of the wards of Bellevue Hospital which are under the care of the Medical Department of the College, has been rearranged with special reference to facilitate teaching. The service, which is continuous throughout the College year, is under the direction of the Professor of Medicine in coöperation with two members of the visiting staff of the hospital and two assistants, members of the staff. The service, which is thus simultaneously visited by a medical staff of five, is further aided by frequent coöperation with members of the various laboratory staffs of the college (such as those of Clinical Pathology, Experimental Medicine, Experimental Therapeutics, Bacteriology, etc.), who conduct researches in a variety of special cases. To this well-equipped service, students of the fourth year are assigned in sections for periods of five weeks daily attendance to act as Clinical Clerks. The clerks record not only the admission histories of the patients, but note the daily progress of each case, its treatment, etc., and in fatal cases, are present at the autopsies. As their notes become part of the permanent records of the Hospital, they are made to feel the importance of accuracy and thoroughness. In this work they are guided by the staff assistants and instructed by the Professor of Medicine and the Professor of Therapeutics, who are members of the hospital staff.

CLINICAL PATHOLOGY.

Instruction in Clinical Pathology is given to the Third Year Students, to the Fourth Year students, and to special and post-graduate students who apply for instruction in some particular subject.

In the third year the class receives instruction from January 1st until March 15th, for three hours two days in the week, and for two hours three days in the week—a total of twelve hours a week

and one hundred and twenty hours for the course, which covers the teaching and practical application of methods for the examination of urine, blood and blood-serum, sputum, exudates and transudates, spinal-fluid, gastric contents, feces, and for the bacteriological examination of clinical material. Special demonstrations of unusual specimens, of blood diseases, and of parasites are also arranged for. After the completion of this preliminary training in laboratory methods, the students retain lockers and desk-room and microscopes in the laboratory, and are expected, under the supervision of a demonstrator, to make proper examinations of laboratory material from cases which have been assigned them in the dispensary and hospital clinics. The third year students, while assigned by sections to work in the medical clinic of the dispensary, are also expected to examine, under the direction of a demonstrator of the Department of Clinical Pathology, the laboratory material from dispensary cases.

During the summer months, from June to October, there is offered the opportunity for valuable routine work in the laboratory of Clinical Pathology, and during this time particularly the student will be encouraged to follow out original lines of work for which there is little time during the scholastic year.

In the fourth year, as in the last semester of the third year, the students have assigned to them locker and desk-room and a microscope, and are expected to make proper laboratory examinations for the study of cases assigned to them in the medical clinics of the dispensary and in the hospitals, and this work is under the supervision of one of the instructors in the laboratory of the Department of Clinical Pathology.

Fourth year students, while assigned by sections to clinical clerkships in the wards of Bellevue Hospital, will make the necessary laboratory examinations in the division laboratory under the supervision of an assistant in Clinical Pathology.

During the fourth year, the students are urged to devote some of their time to the pursuit of investigation in some subject pertaining to clinical pathology.

Special and Post-Graduate Instruction.—Instruction in special subjects is given to post-graduate students (with the degree of M.D.), and a thorough course in the usual subjects covered by

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clinical work is given when desired. The majority of post-graduate students applying for instruction search for particular opportunity for practical work in order to become thoroughly conversant with the details of a special subject, such as the examination of exudates and transudates, or the technique and interpretation of serum-reactions for syphilis (Wassermann's and Noguchi's), and the special courses are designed to meet this want. Each special student is assigned to one of the instructors with whom he works. Special courses are given throughout the year, and information in regard to the details may be obtained by application to the Secretary's office, or to the Department of Clinical Pathology.

SUMMARY.

Medicine.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		22 hours.	10 hours.
Recitations	32 hours.	64 hours.	32 hours.
Clinics		32 hours.	64 hours.
Clinical Clerkships			54 hours.
Sections	96 hours.	99 hours.	90 hours.

Clinical Pathology.

Laboratory recitations and lectures..... 120 hours.

Text-books.—Osler, *Practice of Medicine*; Musser, *Medical Diagnosis*; Tyson, *Physical Diagnosis*; Salinger and Kalteyer, *Medicine*; Woods, *Chemical and Microscopical Diagnosis*.

DEPARTMENT OF GENERAL THERAPEUTICS.

FRANK S. MEARA, M.D., *Professor of Therapeutics.*

Instructors,

MALCOLM GOODRIDGE, M.D., MONTGOMERY H. SICARD, M.D.,
CHARLES E. S. WEBSTER, JR., M.D.

The courses here outlined will obtain for the year 1910 to 1911, when they will be modified and elaborated to meet the requirements entailed by the new standards of admission adopted in 1908.

This department, which is essentially one of Applied Therapeutics, coöperating closely with the departments of Chemistry, Pharmacology and Materia Medica, Applied Pharmacology, and of Experimental Therapeutics on the one hand, and with the Department of Medicine on the other, will seek to correlate the results of

these different fields of work, so far as they relate to the treatment of the individual sick.

It will be the effort of this department to make the courses pre-eminently practical, and to offer to the student something tangible in his future relation to the patient as medical advisor.

To this end the following courses will be offered:

Didactic Lectures.—These lectures will be given by the head of the department to the fourth year students, one each week for the first half year, and two each week for the second half year.

They will deal with the theories and modes of therapy and with the application of therapeutic measures, but always with reference to definite types of disease.

Clinical Clerkships.—In conjunction with the Department of Medicine each student will be assigned to a clerkship in the wards of Bellevue Hospital throughout each afternoon for a period of five weeks. Here he will have groups of patients assigned to him for study. He will take histories, keep a record of the condition and progress of the case, make examinations of blood, urine, stomach contents, etc., under the supervision of the Clinical Pathologist, will be quizzed daily by the head of the department or his assistants on these cases, and take part in conferences on the subject matter of his assignments.

The treatment of patients is the keynote of this work.

Section Work in the College Dispensary.—Students in the fourth year will be instructed in the College Dispensary, the material of which affords a different class of cases from those observed in the wards of the Hospital.

Recitations.—Recitations once a week will be given to the fourth year students throughout the year. These recitations will include quizzes on the subject matter of the lectures, and such other subjects as are best adapted to this mode of instruction.

SUMMARY.

	<i>Fourth Year.</i>
Lectures	43 hours.
Clinical Clerkships	54 hours.
Sections	10 hours.
Recitations	32 hours.

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SURGERY.

LEWIS A. STIMSON, M.D., *Professor of Surgery.*

CHARLES L. GIBSON, *Assistant Professor of Surgery.*

Professors of Clinical Surgery,

GEORGE WOOLSEY, M.D.,

PERCIVAL R. BOLTON, M.D.,

FREDERICK GWYER, M.D.,

JOHN A. HARTWELL, M.D.,

WILLIAM B. COLEY, M.D.,

JOHN ROGERS, M.D.,

EDWARD A. KEYES, JR., M.D.

Instructors,

BENJAMIN TILTON, M.D.,

J. PRESCOTT GRANT, M.D.,

BURTON J. LEE, M.D.,

WILLIAM A. DOWNES, M.D.,

JAMES MORLEY HITZROT, M.D.,

ARCHIBALD E. ISSACS, M.D.,

ARTHUR S. ARMSTRONG, M.D.

Surgery is taught in the recitation room, at the bedside, in the dispensaries, at hospital clinics, and by lectures.

In the second year the students are required to attend recitations on the principles of surgery one hour a week throughout the session, and are instructed in the College Dispensary in surgical examination and diagnosis.

In the third year recitations are continued upon regional surgery; the class is instructed in sections in New York Hospital in history-taking and methods of surgical examination and diagnosis, three hours a week for the first term; and two hours a week bedside instruction in the wards of Bellevue Hospital in the third term.

Formal clinics are held in Bellevue and other hospitals; twenty-two lectures are given by the Professors of Surgery, and a clinic for diagnosis is held once a week throughout the term, at which the students are required personally to examine and report upon the cases.

In the fourth year the students receive clinical instruction in small groups in several hospitals and dispensaries upon general surgery and the special branches—eye, ear, nose and throat, genito-urinary diseases, gynæcology, dermatology and orthopædics—may attend the lectures and clinics, and will have a review quiz in preparation for examination.

The members of the sections are trained in the examination of patients, the dressing of wounds and fractures, the administration of ether, and assisting at operations.

The opportunities for instruction in the special branches are exceptionally ample. There are several clinical teachers in each subject, each with hospital and dispensary services. The student will be enabled directly to examine and study cases, and will have a certain choice as to the time given to each branch.

In addition to the clinics at Bellevue Hospital specified above, clinics of a similar character by other members of the faculty will be announced from time to time as opportunity arises during the session.

Lectures on special topics are given in the college lecture courses in the second term, to which students of all the classes are admitted.

Operative Surgery is taught to small sections of the class in the third and fourth years. The course consists of recitations, work upon the cadaver, and the application of bandages and plaster dressings. As the material is abundant, each member of the class will perform the principal surgical operations.

In connection with the Animal Hospital the students will have opportunities directly to assist in operations. These operations are not experimental or vivisectional, but solely for the relief of existing disease.

Special instruction in operative surgery is offered to graduates in medicine. A circular giving particulars may be had on application to the Secretary.

SUMMARY.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		32 hours.	40 hours.
Recitations	32 hours.	32 hours.	30 hours.
Clinics		54 hours.	86 hours.
Sections	33 hours.	65 hours.	25 hours.
Operative Surgery		24 hours.	*30 hours.

*Discontinued after the present session.

Text-book.—*American Text-book*; Rose and Carless, *Surgery*.

Collateral Reading.—Parks, *Surgery*; Stimson, *Fractures and Dislocations*; Operative Surgery; Dennis, *System of Surgery*.

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OBSTETRICS.

J. CLIFTON EDGAR, M.D., *Professor of Obstetrics and Clinical Midwifery.*

Instructors,

GEORGE D. HAMLEN, M.D., ALBERTUS A. MOORE, M.D.,

HAROLD C. BAILEY, M.D.

Instruction in obstetrics will be given during the second, third, and fourth years by—

1. Recitations. 2. Illustrative lectures. 3. Obstetric clinics and conferences. 4. Attendance upon cases of confinement. 5. Manikin practice and section work. 6. Obstetric histology, pathology, and bacteriology.

1. **Recitations** from a standard text-book will be held by an instructor in obstetrics during the second year upon the physiology, and during the third upon the pathology, of obstetrics, the latter including obstetric surgery.

These recitations are so scheduled as to cover the field of the subject laid out for the college year, are supplementary to the work of the Professor of Obstetrics during each of these two years, and prepare the student for an intelligent appreciation of his subsequent illustrative lectures, attendance upon cases of confinement, clinics, and manikin practice.

2. **The Illustrative Lectures** comprise a systematic course running through the third year, upon the physiology and pathology of obstetrics.

These lectures are theoretical to a limited extent only, being mainly demonstrative and illustrative in character. To this end ample blackboard space is used, as well as an abundant collection of pelvises, entire, normal and deformed, mesial sections of the same, and in addition a supply of diagrams, charts, carefully selected plaster, composition, and metal models, wet and dry preparations, and instruments.

3. **Obstetric Clinics and Conferences.**—A weekly obstetric clinic is held by Professor Edgar a portion of the year for both the third and fourth year classes at the Manhattan Maternity and Dispensary, 327 East 60th Street. At this clinic abnormal cases

of pregnancy, labor, and the puerperium are demonstrated, and the major and minor obstetric operations performed.

In addition, infant feeding and the care of mother and child during the lying-in period and early infancy are taught. During both the third and fourth year, members of the class will be called upon to examine patients and discuss etiology, diagnosis, prognosis, and treatment.

4. Attendance upon Cases of Confinement.—Each candidate for the degree of M.D. is required to present satisfactory evidence to the effect that he has attended a definite number of cases of confinement. To fulfil this requirement students may register as internes in the Manhattan Maternity and Dispensary, 327 East 60th Street, and receive this practical instruction from Professor Edgar and the instructor in obstetrics. Students are lodged in the above hospital for periods of two weeks or more, and attend confinement cases both in the hospital building and in the tenement-house districts of the upper east side of the city.

During the student's attendance upon his practical maternity course he may be excused from the exercises of the College during the fourth college year, otherwise he shall take his practical obstetric course during vacation time (see page 30). Further information concerning the practical obstetric work may be obtained by applying at the secretary's office.

5. Manikin Practice and Section Work.—Manikin practice is given to sections of the class during the third year, and consists of work by individual students upon the manikins, under the supervision and criticism of an instructor.

The mechanical phenomena of labor; modes of delivery; abnormal presentations and positions, with methods of delivery of each; version; application of the forceps, and other manipulations, will be demonstrated by the instructor and performed by the student.

Diagrams, models, casts, wet and dry specimens, will be used in the demonstrations.

The sections will also be instructed at the bedside at Bellevue Hospital and Manhattan Maternity and Dispensary in the manage-

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ment of pregnant and parturient women, the care of the newborn child, abdominal palpation, and pelvic mensuration.

6. Obstetric Histology, Pathology, and Bacteriology.—Laboratory instruction is given by the Assistant Professor of Histology upon the histology of the vulva, vagina, uterus, ligaments, Fallopian tubes, and ovaries in the pregnant and non-pregnant conditions, and by the Professor of Pathology upon the histology and pathology of the decidua, chorion, placenta, and umbilical cord.

SUMMARY.

	<i>Second Year.</i>	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		21 hours.	
Recitations	32 hours.		
Clinics		64 hours.	15 hours.
Sections		44 hours.	

Text-book.—Edgar, *Practice of Obstetrics.*

DEPARTMENT OF PATHOLOGY.

General Pathology, Pathological Anatomy, Experimental Pathology, Chemical Pathology, Bacteriology.

JAMES EWING, M.D., *Professor of Pathology.*

BERTRAM H. BUXTON, M.D., *Professor of Experimental Pathology.*

WILLIAM J. ELSER, M.D., *Professor of Bacteriology.*

OTTO H. SCHULTZE, M.D., *Assistant Professor of Pathological Anatomy.*

JOHN C. TORREY, Ph.D., *Assistant Professor of Experimental Pathology and Lecturer in Hygiene.*

CHARLES NORRIS, M.D., *Demonstrator in Pathological Anatomy.*

MAX G. SCHLAPP, M.D., *Instructor in Neuropathology.*

DOUGLAS SYMMERS, M.D., *Instructor in Pathology.*

FRANK M. HUNTOON, M.D., *Instructor in Bacteriology.*

E. ROSS FAULKNER, M.D., *Instructor in Surgical Pathology.*

RUSSELL E. CECIL, M.D., *Instructor in Pathological Anatomy.*

LEOPOLD JACHES, M.D., *Instructor in Microphotography.*

HENRY T. LEE, M.D., *Assistant in Pathology.*

JAMES B. GERE, M.D., *Assistant in Neuropathology.*

LAWRENCE W. FAMULENER, M.D., *Assistant in Bacteriology.*

ELISE S. L'ESPÉRANCE, M.D., *Assistant in Pathology and Librarian.*

ALFRED RAHE, *Assistant in Experimental Pathology.*

GENERAL PATHOLOGY.

The course of instruction in Pathology in the second year comprises a preliminary set of lectures on the theory and classification of inflammations, which is designed to acquaint the student with the main facts in this field, to prepare him for studies in medicine and surgery, and to establish a uniform system of nomenclature to be used in this and other departments. In the third term of the second year systematic laboratory instruction is begun with microscopical demonstrations and lectures on the pathology of Degeneration, Inflammation, Infectious Granulomata, and Tumors. At the same time demonstrations of gross pathological specimens are conducted illustrating these and other diseases, while the work in Bacteriology occupies the afternoon hours of this session.

In the first term of the third year the Special Pathology of the organs is taken up, including Dermatopathology and Protozoan Diseases, and demonstrations in Pathological Anatomy are continued. The second term of the third year is occupied with courses in the Pathology of Surgical Diseases, Gynæcological Diseases and Diseases of the Nervous System.

In the fourth year the student performs autopsies, and attends Lectures in Hygiene, Immunity, and other selected topics.

SCHEME OF INSTRUCTION IN PATHOLOGY.

I. Pathology of Inflammation.—Ten lectures. Required at the opening of the second year. Prof. Ewing.

II. General Pathology.—Lectures, museum and microscopical demonstrations, 100 hours. Required in the third term of second year.

(a) Degeneration, Inflammation, Infectious Granulomata, 66 hours, March, April.

(b) Tumors, 33 hours, April, May.

III. Special Pathology. Lectures, museum and microscopical demonstrations, 200 hours. Required in first and second terms of third year.

(a) General Diseases. 62 hours, Oct., Nov.

(b) Dermatopathology. 18 hours, Dec.

(c) Protozoan Diseases. 18 hours, Dec.

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(d) Surgical Pathology. 36 hours, Jan'y.

(e) Gynæcological Pathology. 18 hours, Feb'y.

(f) Neuropathology. 36 hours, Feb'y, March.

Prof. Ewing, Drs. Lee, Symmers and Faulkner.

IV. Pathological Anatomy.—On the days alternating with the studies in General and Special Pathology demonstrations of gross pathological specimens are held on the material collected from autopsies. With the viscera of each case is presented an epitome of the clinical history, and when necessary frozen sections of the organs are made, and the relation of the gross and microscopical changes to the clinical symptoms is explained. The student here sees the organs of many of the fatal cases studied in hospital wards. Gross pathological diagnosis is taught as a separate branch of this subject.

Lectures and demonstrations, 128 hours. Required in the third term of second year, and in first and second terms of third year. Assistant Professor Schultze and Dr. Cecil.

V. Medico-legal Pathology.—The medico-legal relations of Pathology are extensively illustrated in the material collected at the Morgue and various hospitals, and special attention is devoted to this subject in the third and fourth years.

VI. Autopsy Technics.—In the fourth year the student performs autopsies at the Morgue during a session of six weeks, three exercises weekly. 36 hours. Assistant Professor Schultze and Dr. Norris.

VII. Lectures in Special Pathology.—Lectures on special topics in Pathology are given during the third and fourth years. The lectures cover such subjects as immunity, the etiology of tumors, cerebral hemorrhage, and the pathology of diseases of nutrition. At suitable times the topics that are being pursued in the research laboratories and the objects of these researches may be presented to the student in special lectures. Profs. Ewing, Elser, Beebe, Schultze, Torrey and Dr. Schlapp.

VIII. Recitations.—One recitation every week is required of each student throughout the course in General and Special Pathology. These exercises cover the work of the preceding week, and

are of the nature of conferences for the fuller discussion of the topics considered.

IX. Examinations.—Written and practical examinations are held at the end of each year. The standing of the student is determined from the theoretical and practical work, the recitations, and the examination.

EXPERIMENTAL PATHOLOGY.

In this department are associated a number of men whose time is devoted to the study of problems in medical science. Abundant space and modern facilities are provided in the Loomis Laboratory, in which are laboratories equipped for Experimental Pathology, Bacteriology and Hygiene, Serum Pathology, Chemical Pathology, and Microphotography. Instruction has been given to a number of assistants and volunteer workers who desired to enter the field of research in these subjects, and is available to properly qualified applicants.

The members of this staff include: Profs. Buxton, Torrey, Dr. Jaches, Mr. Rahe, and others.

Since 1904 the work of the Huntington Fund for Cancer Research has been located in the Loomis Laboratory.

The organized work in connection with this subject has been distributed among the Departments of Pathology, Prof. Ewing; Experimental Pathology, Prof. Buxton; Chemical Pathology, Prof. ———; Embryology and Experimental Morphology, Prof. Stockard; Experimental Therapeutics, Prof. Beebe; and the various clinics, especially that of Prof. Coley at the General Memorial Hospital, those of Profs. Alexander and Hartwell at Bellevue Hospital, and that of Dr. T. G. Sherwood, D.V.S.

BACTERIOLOGY.

In the course in bacteriology the student is first made familiar with the methods of disinfection, and is required to prepare the ordinary culture media. The work then proceeds to the methods of staining and examining bacteria; their artificial cultivation and the study of biological characters; the methods employed in the separation of species; the general relation of pathogenic bacteria to disease; and concludes with the biological analysis of air, water, soil, and milk. Cultures are made from the viscera of cases of the various infectious diseases and the student is required to cultivate

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and identify the important pathogenic micro-organisms. The work is supplemented when necessary by the use of pure cultures and by the exhibition of anaërobic cultures. Each student receives practical instruction in the artificial immunization of animals and in the demonstration of the reactions of immunity.

Laboratory work and lectures. 110 hours. Required in the second year. Prof. Elser and Dr. Huntoon.

DEPARTMENT OF EXPERIMENTAL THERAPEUTICS.

S. P. BEEBE, M.D., *Professor of Experimental Therapeutics.*

RICHARD WEIL, M.D., *Instructor in Experimental Therapeutics.*

LOUIS W. RIGGS, Ph.D., *Instructor in Experimental Therapeutics.*

ROBERT A. COOKE, M.D., *Assistant in Experimental Therapeutics.*

ELIZABETH COOKE, Ph.D., *Assistant in Experimental Therapeutics.*

ELEANOR VAN N. VAN ALSTYNE, B.S., *Assistant in Experimental Therapeutics.*

B. FELDSTEIN, M.D., *Assistant in Experimental Therapeutics.*

WILLIAM DUNN, *Assistant in Experimental Therapeutics.*

The Department of Experimental Therapeutics has been established in order to facilitate the application of the medical sciences to the problems of practical therapeutics and to coördinate the work of the other scientific and clinical departments in this field. The Loomis Laboratory has been remodeled in order to provide proper accommodations for this work. New laboratories have been equipped with modern facilities for work in physiology, pathology, serum pathology and physiological chemistry, with ample space for the care of the animals and a fully equipped operating room.

The permanent staff of the department includes workers who have specialized in several different fields: Dr. Weil in Pathology, Dr. Cooke in Physiology, and Dr. Riggs in Chemistry.

Opportunities for research will be afforded to volunteer workers who have had the requisite training, and who can give sufficient time. The location of the laboratory opposite the new Bellevue Hospital assures an abundance of clinical material.

The establishment of these laboratories will make it possible to extend the work of the Huntington Fund for Cancer Research in the direction of Experimental Therapeutics.

SPECIAL DEPARTMENTS OF MEDICINE AND SURGERY.

NEUROLOGY.

CHARLES L. DANA, M.D., *Professor of Clinical Medicine, Department of Neurology.*

JOSEPH FRAENKEL, M.D., *Associate Professor of Clinical Medicine, Department of Neurology.*

J. RAMSAY HUNT, M.D., *Lecturer in Clinical Medicine, Department of Neurology.*

Instructor,

ALEXANDER S. LEVERTY, M.D.

The regular work consists of a preliminary series of lectures by Professor Dana, in which the general outline of the work for the year is given, with demonstrations of the general anatomy, general symptomatology, and methods of examination of the nervous system. During the rest of the term clinical lectures on nervous diseases are held weekly in the amphitheatre of Bellevue Hospital or at the college. Section work is given weekly to classes in the wards of Bellevue Hospital, and four times a week in the dispensary of the college. In this dispensary, section-work instruction is given in history-taking in the examination of patients, and in electro-therapeutics. In addition a special course of lectures on practical phases of neurology is given by Dr. Joseph Fraenkel.

It is considered of the greatest importance that the student of nervous diseases be thoroughly grounded in the anatomy and physiology of the nervous system, therefore courses in gross and microscopical anatomy of the nervous system are provided in the histological laboratory and, similarly, a course in neuropathology is given in the pathological laboratory.

Special instruction in electro-therapeutics is given by one of the instructors, and special hours are given to psycho-therapy at the Dispensary. Thus the course of instruction aims to provide the student before he graduates with instruction in the microscopical

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anatomy of the nervous system, in its physiology and pathology, and also with practical clinical instruction in the amphitheatre, at the bedside, and in the dispensary.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures	5 hours.	
Clinics	27 hours.	22 hours.
Sections		5 hours.

Text-book.—Dana, *Diseases of the Nervous System and Psychiatry.*

Collateral Reading.—Gowers, *Diseases of the Brain and Spinal Cord*; works on nervous diseases by Dercum, Mills, Sachs, Starr, Church and Peterson; Obersteiner, *Anatomy of the Nervous System.*

PSYCHO-PATHOLOGY.

AUGUST HOCH, M.D., *Professor of Clinical Medicine, Department of Psycho-pathology.*

Clinical Instructors,

GEORGE H. KIRBY, M.D.

C. MACFIE CAMPBELL, M.D.

The course is to cover the principal data and methods of modern psycho-pathology, the diagnosis and legal commitment of the insane, and the medico-legal problems of insanity.

It consists of general lectures and clinics, each followed in a few days by a one-hour review of the topic of the clinical demonstration, and two lectures on the practical issues, commitments and medico-legal principles.

Three to four hours of optional section work may be given.

SUMMARY.

General lectures	7 hours.
Clinics	16 hours.
Reviews	8 hours.
Section work (optional).....	3-4 hours.

Reference-book.—Kraepelin, *Clinical Psychiatry.*

PEDIATRICS.

JOSEPH E. WINTERS, M.D., *Professor of Clinical Medicine, Department of Pediatrics.*

Clinical Instructors,

WILLIAM SHANNON, M.D.

WILLIAM D. TYRRELL, M.D.

This department will embrace clinical instruction and section teaching in all the important diseases of infancy and childhood.

There will be one clinical lecture each week in the college building, and clinical lectures in the Willard Parker Hospital on scarlet fever and diphtheria.

In connection with the dispensary of the Children's Department in the college building there is an amphitheatre for section teaching, and isolation rooms for contagious diseases, so that students have ample opportunity for the personal study of disease.

Two hours each week will be devoted to section teaching in the dispensary to the students of the fourth year.

Students will be required to examine sick children and discuss the diagnosis and treatment of patients assigned to them.

Special attention is given to the hygiene and feeding of infants; the digestive disorders of infants; the dietetics of childhood and the food disorders of infancy and childhood; the anatomical and physiological peculiarities of infancy and childhood; and the influence these peculiarities have on the manifestations of disease in children.

One of the distinguishing features of this department will be the instruction of each student in the art of diagnosis by the professor in charge.

There will be practical bedside illustrations of the management, care, and therapeutics of all the acute diseases of infancy and childhood.

In the clinical laboratory microscopical examinations will be made of secretions and excretions, of lesions of the mouth and throat, and of sections of anatomical lesions of the important diseases of childhood.

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SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Clinics	32 hours.	32 hours.
Sections		10 hours.

Text-book.—Still, *Common Disorders and Diseases of Childhood*; Holt, *Diseases of Infancy and Childhood*, fifth edition, 1909; Rotch, *Pediatrics*.

Collateral Reading.—Starr, *American Text-book on the Diseases of Children*; Welch and Schamberg, *Acute Contagious Diseases*.

GYNÆCOLOGY.

WILLIAM M. POLK, M.D., *Professor of Clinical Surgery, Department of Gynæcology.*

Instructors,

CHARLES C. BARROWS, M.D.,	GEORGE D. HAMLEN, M.D.,
GEORGE G. WARD, JR., M.D.,	LEROY BROUN, M.D.

Instruction in gynæcology is given by recitations, lectures, ward and class-room demonstrations, clinics, and laboratory demonstrations.

Five Lectures, upon topics of special interest and importance to the subject as a whole, will be given during the fourth year.

Recitations are planned to cover the entire subject, and are held one hour a week during the fourth* year of the course. In order that the instruction throughout the department may be as nearly in unison as possible a synopsis of the subject-matter of each lesson is prepared by the instructor and amended and revised by the head of the department. This is presented to the student for comparison with his text-book, to which it is an addendum. This method insures the coöperation of the head of the department in the groundwork of his subject and enables him to keep in touch with each student until his graduation.

Class-room and Ward Demonstrations are given to sections of

*To be given hereafter in the third year.

the fourth-year class twice a week throughout the year. This instruction includes the examination of patients by the students, who are thereby drilled in the methods of physical diagnosis as applied to the pelvis. When necessary the patients are anæsthetized.

The routine treatment appropriate to the various conditions found is demonstrated, the students assisting when possible. In this way, not only is familiarity acquired with normal conditions within the pelvis and the various departures from this state induced by disease, but opportunity is afforded to see and put in actual practice measures of relief and to watch the subsequent course and treatment of these cases.

Operations are performed three days every week at which the several sections are enabled to study the detail of every operation peculiar to this department.

A General Clinic is held once a week at which students selected in rotation are required to examine the patient, make a diagnosis, and suggest treatment. They are questioned before the class upon all these topics, as they relate to the case in hand, so as to determine the correctness of their conclusions. Should operation be called for, it is then performed.

Laboratory Demonstrations of secretions, discharges, and specimens obtained from patients who come under observation during this course are made to sections of the third-year class as a part of the course in clinical pathology.

SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Lectures		6 hours.
Recitations	32 hours.	32*hours.
Clinics		32 hours.
Sections		20 hours.

Text-books.—Penrose, *Gynæcology*; Findley, *Diagnosis*.

Collateral Reading.—Dudley, *Gynæcology*; Garrigues, *Diseases of Women*.

*Discontinued after the present session.

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DISEASES OF THE GENITO-URINARY ORGANS.

SAMUEL ALEXANDER, M.D., *Professor of Clinical Surgery, Department of Diseases of the Genito-urinary System.*

Clinical Instructors,

FRANCIS C. EDGERTON, M.D., VICTOR C. THORNE, M.D.,
DAVID WALLACE MACKENZIE, M.D.

The courses in this department are required of students during the third and fourth year. They are designed to give instruction in diagnosis and treatment of the surgical diseases of the male genital and urinary organs and syphilis.

Clinic.—A clinic will be given in the amphitheatre of Bellevue Hospital once each week after the first of January by Professor Alexander. At this clinic the principal operations upon the male urinary and genital organs will be performed before the class, and special attention will be given to the subject of diagnosis and post-operative management of cases. Attendance upon these clinics is required of students during the third and fourth years.

Lectures.—Third year. A course of lectures upon syphilis will be given to the third-year class during the third term of the college session.

Lectures.—Fourth year. One lecture a week will be given by Professor Alexander during the first term, introductory to the clinical course, and upon syphilis.

Section Teaching.—Third year. The third-year class will be divided into sections of small size, and instruction will be given by Professor Alexander and the clinical instructors, either in the wards of Bellevue Hospital or in the College Dispensary. This course begins on January 1st.

Section Teaching.—Fourth year. The fourth-year classes will be divided into sections of small size, and instruction will be given either in the wards of Bellevue Hospital or in the College Clinic, by Professor Alexander, assisted by the clinical instructors. These courses will continue throughout the year.

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SUMMARY.

	<i>Third Year.</i>	<i>Fourth Year.</i>
Clinics	21 hours.	21 hours.
Sections	32 hours.	10 hours.
Lectures	11 hours.	11 hours.

Text-books.—White and Martin; Keyes.

Collateral Reading.—Hyde and Montgomery; Keyes and Chetwood; Watson and Cunningham.

DERMATOLOGY.

GEORGE T. ELLIOT, M.D., *Professor of Clinical Surgery, Department of Dermatology.*

JAMES C. JOHNSTON, M.D., *Assistant Professor of Clinical Surgery, Department of Dermatology.*

Clinical Instructor,

HANS J. SCHWARTZ, M.D.

Instruction in Dermatology will be given by the Clinical Professor and his assistants. No teaching will be given didactically, but the cutaneous diseases will be demonstrated on the living subject. Abundance of material for such instruction is obtainable, and the student can thoroughly familiarize himself with the more common as well as with the rarer diseases of the skin by actual personal contact and observation. Attention is particularly paid to the diagnosis and the etiology of skin diseases, but their therapeutics also receive due consideration.

SUMMARY.

	<i>Fourth Year.</i>
Sections	25 hours.

Text-books.—Stelwagon, *Diseases of the Skin*; Hyde, *Dermatology*.

LARYNGOLOGY AND RHINOLOGY.

JAMES E. NEWCOMB, M.D., *Assistant Professor of Clinical Surgery, Department of Laryngology and Rhinology.*

Clinical Instructor,

FRANKLIN T. BURKE, M.D.,

Instruction in Laryngology and Rhinology is given by clinical lectures at the college by the Professor of the department. The

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subjects then considered are demonstrated to the fourth-year students by the instructor and by the assistants. The class is divided into sections, and each member is expected to examine patients and perform manipulations. The clinics are fully illustrated by plates and models, and, as far as possible, by clinical material.

SUMMARY.

	<i>Fourth Year.</i>
Lectures	8 hours.
Sections	15 hours.

Text-book.—Knight, *Diseases of the Nose and Throat.*

Collateral Reading.—Grünwald, *Atlas of Diseases of the Larynx*;
Grünwald, *Atlas of Diseases of the Mouth, Pharynx, and Nose.*

OPHTHALMOLOGY.

CHARLES STEDMAN BULL, M.D., *Professor of Clinical Surgery,*
Department of Ophthalmology.

Clinical Instructors,

ROBERT G. REESE, M.D.,

J. HERBERT CLAIBORNE, M.D.

Instruction in Ophthalmology consists in lectures at the college building once a week, during the months of October, November, and December, and in section teaching two hours a week at the college dispensary throughout the year. The weekly lectures at the college are didactic, and consider the subjects of the external or superficial diseases of the eye, the anomalies of the ocular muscles, and the deep lesions of the eye which are not susceptible of clinical demonstration. The sectional teaching at the college dispensary is devoted partly to clinical ophthalmology and the use of the ophthalmoscope, and partly to instruction in the errors of refraction and the rudiments of the fitting of lenses. Thus the entire field of ophthalmology is covered.

SUMMARY.

	<i>Fourth Year.</i>
Clinics	10 hours.
Sections	20 hours.

Text-book.—De Schweinitz.

Collateral Reading.—Jackson, Nettleship, May, Fuchs.

OTOLOGY.

FREDERICK WHITING, M.D., *Professor of Clinical Surgery, Department of Otolology.*

Clinical Instructor,
GEORGE B. MCAULIFFE, M.D.

During the first third of the fourth year a systematic course of weekly lectures is given. These lectures are practical in character, including a consideration of the anatomy and physiology of the ear and the various methods of examination. Patients are shown to the class in order to familiarize the students with the symptoms and character of the more important diseases.

For clinical instruction in the dispensary, the fourth-year class is divided into sections. Each student receives practical instruction from Professor Whiting and his assistants in the examination of patients, the use of the otoscope, and the various methods of testing the hearing. The student is permitted to examine patients and, after a probationary period, to prescribe for them and thus gradually assume the duties of a clinical assistant. The students also have an opportunity of witnessing the more important operations in aural surgery, including intracranial complications, at the New York Eye and Ear Infirmary.

SUMMARY.		<i>Fourth Year.</i>
Clinics		9 hours.
Sections		15 hours.

Text-book.—Bacon, *On the Ear.*

Collateral Reading.—Politzer, *Diseases of the Ear*; Macewen, *Pyogenic Infective Diseases of the Brain and Spinal Cord*; Whiting, *The Modern Mastoid Operation.*

ORTHOPÆDIC SURGERY.

NEWTON M. SHAFFER, M.D., *Professor of Clinical Surgery, Department of Orthopædic Surgery.*

Clinical Instructors,
JOHN JOSEPH NUTT, M.D., PERCY W. ROBERTS, M.D.

The course of study in the Orthopædic Department includes a stated clinical lecture once a week, with detailed demonstrations in

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sectional work twice a week during two months of the year.

During the regular clinical course especial attention is given to the early recognition of the deforming diseases of childhood, also to the symptomatology, pathology, and differential diagnosis of chronic and progressive deformities, including the mechanical and operative treatment.

In detail, the course consists of practical illustrations of methods of treatment, the apparatus used being thoroughly explained both in construction and in principle, attention being called to even minute points of construction and use. The operative side is fully dwelt upon, the indications for operative interference as an adjunct to the mechanical work being demonstrated. Ample clinical material is provided, and models of conventional forms of apparatus are placed at the disposal of students.

In the section and laboratory work the student is required to assist in the management of selected cases, to familiarize himself with the various methods of treatment, to construct the simpler forms of apparatus, to secure a practical knowledge of the details of construction of the more complicated instruments, and to familiarize himself with the pathological conditions existing in the deformities of childhood.

SUMMARY.		<i>Fourth Year.</i>
Clinics		10 hours.
Sections		10 hours.
<i>Text-book.</i> —Bradford and Lovett.		

HYGIENE.

JOHN C. TORREY, Ph.D., *Assistant Professor.*

WALTER BENSEL, M.D., *Lecturer.*

Instruction in many of the branches of hygiene and preventive medicine is a prominent feature in some of the courses pursued in the several departments of Chemistry, Bacteriology, Pathology, and Medicine.

The topics thus covered include the chemical and bacterial analysis of air, water, milk; the preservation and adulteration of foods; and the general diagnosis, control, and prevention of infectious diseases.

The more distinctive branches of hygiene and preventive med-

icine are presented in a course of lectures to third and fourth year students. Some of the topics thus considered are water analysis and supply, medicinal waters, spas and health resorts, diet, meat and milk inspection, relation of disease in animals to man, hygiene of factories, occupation diseases, caisson disease, altitude and ventilation, heredity, morbidity and mortality statistics, principles of heredity, prophylaxis and hygiene of transmissible diseases and tropical hygiene, personal hygiene, parasitology, lighting of buildings and care of the eyes, municipal sanitation and regulation and the functions of the health officer.

The lecturers for the session of 1909-1910 included Professors Lusk Hatcher, V. A. Moore, Torrey, Coleman, Stockard, Alexander, Johnston, Hastings, Bull, and Doctors Riggs, Webster, Keays, and Bensel.

Text-books.—Bergey, *Text-book of Hygiene*; Notter, *Theory and Practice of Hygiene*; Egbert, *Hygiene and Sanitation*.

MEDICAL JURISPRUDENCE.

R. A. WITTHAUS, M.D., *Professor of Medical Jurisprudence*.

This subject is covered in the regular course of study by several departments and by special lectures. The responsibilities of the physician towards the insane and their relatives and the general public, and the criminal aspects of the mentally defective are discussed by Professor Hoch. In the course on Obstetrics Professor Edgar takes up the moral and legal side of rape, feigned and unconscious pregnancy, what constitutes a "live birth," feigned or unconscious delivery, injury to the fœtus during precipitate labor, post-mortem delivery and the diagnosis of recent delivery. Professor Witthaus in the teaching of Toxicology discusses both its medical and medico-legal relations, and gives considerable attention to the "expert" witness and his rights and obligations, and advises as to how he should conduct himself. Dr. Schultze, in addition to his regular course in Gross Pathology, demonstrates medico-legal autopsies and cases of homicide, suicide, accident and abortion. The contractual relation between the physician and his patient, as well as the recovery of compensation and the liability for "damages," malpractice and privileged communications are fully discussed.

EXAMINATIONS.

REQUIREMENTS FOR ADVANCEMENT IN COURSE.

Students are advanced in course from one year to the next upon recommendation by heads of Departments after examination in the work of that year, but examinations in major or minor subjects may, at the discretion of the Head of the Department, include all the work previously covered in the year or years preceding the examinations in question. There is, however, no unnecessary repetition of subjects taught from year to year. Students who have not succeeded in passing all their examinations will be allowed to enter upon the next year's studies, only provided they have, at the beginning of the session, passed examinations in the subjects in which they had failed.

Examinations for advancement in course, graduation, and admission to advanced standing are held at the close of the year, except that in each laboratory course extending through a part of the year only, the examination is held at the close of the course.

Examinations for conditioned students and for those desiring admission to advanced standing, who have not taken the spring examinations, are held during the week in which the college opens. For the session of 1910-1911 these examinations will begin Sept. 26th.

The subjects examined upon are divided into major and minor subjects, and a grade of 75 per cent. is required to pass.

The minor subjects embrace laboratory courses and those in which instruction is given by recitations only.

Subjects of Examination for Admission to the Second Year.

Major Subjects—Anatomy.

Organic Chemistry (including laboratory work).

Minor Subjects—Histology.

Embryology and Comparative Morphology.

Physiological Chemistry.

Physiology.

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Conditions allowed (at the spring examinations): 1 Major and 1 Minor; or 2 Minor subjects.

NOTE 1.—In each of those branches in which recitations are held throughout the year, there shall be written reviews conducted by the instructors and supervised by the professor in charge of the department, and also a final written review conducted by the professor himself at the close of the year. The written reviews conducted by the instructors shall count as a single recitation, the object being to ascertain the knowledge acquired by the student.

NOTE 2.—*All conditions must be successfully passed before entrance into the next succeeding year will be allowed.*

Subjects of Examination for Admission to the Third Year.

Major Subjects—Physiology.

Materia Medica and Pharmacology.

Minor Subjects—Medicine.

Surgery.

Obstetrics.

Bacteriology.

Anatomy.

Pathology.

Conditions allowed: 1 Major and 1 Minor; or 2 Minor subjects.

(See Notes 1 and 2 above.)

Subjects of Examination for Admission to the Fourth Year.

Major Subjects—Applied Pharmacology.

Pathology.

Minor Subjects—Obstetrics.

Medicine.

Surgery.

Toxicology.

Clinical Pathology.

Pediatrics.

Neurology.

Gross Pathology.

Genito-urinary Diseases.

Conditions allowed: 1 Major and 1 Minor; or 2 Minors.

(See Notes 1 and 2 above.)

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Subjects of Examination for Graduation at the End of the Fourth Year.

Major Subjects—Medicine.

Surgery.

Therapeutics.

Obstetrics.

Gynæcology.

Minor Subjects—Hygiene.

.. Ophthalmology.

Neurology.

Laryngology and Rhinology.

Orthopædics.

Pediatrics.

Psycho-pathology.

Otology.

Dermatology.

Genito-urinary Diseases.

The examinations in the major subjects are allowed two hours, and in the minor subjects one hour each.

If any student fails to pass in not more than one major, or in two minor subjects, a re-examination in those subjects may be allowed within two weeks, and if the candidate is then successful the degree may be conferred.

If the candidate fails to pass in any subject at this second examination, the work of the fourth year must be repeated.

REQUIREMENTS FOR GRADUATION. ..

1. Candidates for the degree of doctor of medicine must have studied medicine for four full years in an accredited medical college, and the fourth year at least must have been spent in the Cornell University Medical College.

2. Candidates must present satisfactory evidence of good moral character and of being not less than twenty-one years of age.

3. Candidates must file with the Secretary of the Faculty satisfactory evidence of having complied with the entrance require-

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ments (see page 21), together with the requisite legal medical student certificate.

NOTE.—This certificate is issued by the Department of Education of the State of New York on presentation of a diploma from a recognized College or University or properly attested certificate showing that such a diploma has been granted, together with a fee of twenty-five cents. If the student so requests, the Secretary of the Faculty may forward such diploma or certificate to the Department of Education of the State of New York with a request for the legal medical student certificate.

4. Candidates must have dissected at least one lateral half of the cadaver (see page 36). They must, further, have taken the regular course of two weeks in practical obstetrics, and a certificate covering this course must be filed at the Secretary's office before registration for the final examinations, which begin about the last week of May.

5. In addition to the yearly examinations above specified for advancement in course, candidates must pass at the end of the fourth year examinations in medicine, surgery, therapeutics, obstetrics, gynæcology, and the special branches which are specified on page 74.

6. Candidates rejected at the final examination will not be re-examined until after having repeated the fourth year of study.

Before being readmitted to the fourth year the candidate may be required to pass a satisfactory examination in anatomy, physiology, chemistry, and materia medica.

7. The degree will not be conferred upon any candidate who absents himself from the public Commencement without the special permission of the Faculty.

8. The Faculty reserves the right to terminate the connection of any student with the institution *at any time* on the ground of what they may deem moral or mental unfitness for the profession, or improper conduct while connected with the College.

DIPLOMAS OF LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND MEMBERSHIP OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Graduates of the Cornell University Medical College are admitted to the final examinations for the diploma of Licentiate of the Royal College of Physicians of London and Membership of the Royal College of Surgeons of England, upon presenting proper

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certificates that certain conditions applicable to the foreign universities and colleges, which are recognized by the examining board, have been complied with.

Further information may be obtained from the Secretary of the Board (Mr. F. G. Hallet) at the Examination Hall, Victoria Embankment, London, W. C.

Prizes.

I. For general efficiency.

In commemoration of John Metcalfe Polk, an Instructor in this College, who graduated from the Medical Department of Cornell University on June 7, 1899, and died on March 29, 1904, an annual prize of \$500 will be presented at each Commencement to the members of the Graduating Class who have completed the full course of study in Cornell University Medical College.

This prize will be awarded as follows:

To the student having the highest standing.....\$300

To the student having the second highest standing....\$125

To the student having the third highest standing.....\$75

II. For efficiency in Neurology.

Two prizes, one of \$50 and another of \$25, are offered by Professor Dana to the students of the graduating class, to be designated by him, who make the two best reports of neurological cases seen during the course.

III. For efficiency in Otology.

Two prizes, the first of \$50, the second of \$25, are offered by Professor Whiting to the two students of the graduating class to be designated by him, who make the best records in the practical and theoretical work in otology.

Hospital Appointments.

The students and graduates of the Cornell University Medical College are expected to compete for positions on the resident staff of Bellevue and the other hospitals of the city.

Some of these hospitals are: The City, Harlem, Gouverneur, New York, St. Luke's, Presbyterian, St. Vincent's, St. Francis', Mount Sinai, German, Hudson Street, New York Eye and Ear In-

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firmary, and the hospitals in Brooklyn, Jersey City, Newark, Paterson, etc.

The requirements, the times of examination, and the period of service differ. The details can be learned by application, written or in person, to the superintendents or to the secretaries of the medical boards of the various hospitals.

HOSPITAL APPOINTEES.

Class of 1909.

Bellevue Hospital.

(SECOND DIVISION.)

Davis Baker (1st place).
Clayton Morgan Axtell.
John Stanley Kenney.
Reuben Spencer Simpson.

(FOURTH DIVISION.)

William Henry Curley.
Edward Dowdle.
Richard Thomas Hopkins.
Louis Ashley Van Kleeck.

Harlem Hospital.

Carl Esselstyne McCoombs, A.B.
(1st place).
Edwin George Langrock.

Lincoln Hospital.

Valentine Coleman Baker (1st place).

*Methodist Episcopal Hospital,
Brooklyn, N. Y.*

Esmonde Bathgate Smith (1st place).
John Cooper Graham.

J. Hood Wright Hospital.

John Eugene Breglia (1st place).

Mount Sinai Hospital.

Morris Hirsch Kahn.
Salo Nordeman Weber, A.B.

German Hospital.

Victor William Anderson.
Walter Bonnell Holton.

*Randall's Island Hospital for
Children.*

Isaac Workman (1st place).
Bernard Feldstein.

Lebanon Hospital.

Jacob Bower.
William Goldstein.

Brooklyn Jewish Hospital.

Irving Tran (1st place).
Edward Berger.
Samuel George Blum.
Isidor Caplan.

Brooklyn Hospital.

Harold Buddington (1st place).
John Henry Isquith.

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King's Park State Hospital.

Frank Deniston.

Roosevelt Hospital.

Elbert Theodore Rulison, Jr., A.B.

New York Lying-in Hospital

Farrand Baker Pierson, A.B.

Har Moriah Hospital.

Peter Kosciusko Olitsky (1st place).

Saul Schlegman.

Beth Israel Hospital.

Meyer Solomon.

Adolph Jacobowitz (externe).

St. Mark's Hospital.

Giacomo Abraham Senigaglia.

St. Francis' Hospital.

James Howard Van Marter (1st place).

Smith Infirmary,

Staten Island.

Rudolph Daniel Orth (1st place).

Christ Hospital.

Jersey City, N. J.

Albert Dygert Greene (1st place).

Bayonne Hospital,

Bayonne, N. J.

Morris Frank.

Worcester Memorial Hospital,

Worcester, Mass.

Mary Lucia Hamblet, A.B.

Newark City Hospital,

Newark, N. J.

Morris Streen.

King's County Hospital,

Brooklyn, N. Y.

William Yum.

W. Philadelphia Hospital for

Women,

Philadelphia, Pa.

Luvia Marguerite Willard.

Bridgeport General Hospital,

Bridgeport, Conn.

Charles Wolf.

German Hospital,

San Francisco, Cal.

Samuel Weiss.

FACULTY OF MEDICINE AT ITHACA.

JACOB GOULD SCHURMAN, A.M., D.Sc., LL.D.,
President.

SIMON HENRY GAGE, B.S.,
Professor of Histology and Embryology, Emeritus.

WILLIAM RIDGELEY ORNDORFF, A.B., Ph.D.,
Professor of Organic Chemistry.

ABRAM TUCKER KERR, B.S., M.D.,
Professor of Anatomy.

BENJAMIN FREEMAN KINGSBURY, Ph.D., M.D.,
Professor of Histology and Embryology.

SUTHERLAND SIMPSON, D.Sc., M.D.,
Professor of Physiology.

ANDREW HUNTER, A.M., B.Sc., M.B., Ch.B.
Assistant Professor of Biochemistry.

MELVIN DRESBACH, M.S., M.D.,
Assistant Professor of Physiology.

JACOB PARSONS SCHAEFFER, A.M., M.D.,
Assistant Professor of Anatomy.

WILLIAM ATWOOD HILTON, B.S., Ph.D.,
Instructor in Histology and Embryology.

EDSON HOYT NICHOLS, A.B.,
Instructor in Chemistry.

HARRY WELDAY MAYES, B.S.,
Instructor in Physiology.

MAURICE HOPE GIVENS, Ph.B.,
Instructor in Biochemistry.

JAMES A. BADERTSCHER, A.M.,
Assistant in Histology and Embryology.

PHILIP EDWARD SMITH, B.S.,
Assistant in Histology and Embryology.

SIDNEY WINTERS SHATTUCK, A.B.,
Assistant in Chemistry.

ABRAM T. KERR, B.S., M.D.,
Secretary of the Medical College at Ithaca.

INSTRUCTION AT ITHACA

DURING THE FIRST YEAR OF THE COURSE.

CALENDAR FOR ITHACA.

First Term, 1910-1911.

September 27th, Tuesday.—Academic year begins; matriculation of new students; University scholarship examinations begin.

September 28th, Wednesday.—Matriculation of new students.

September 29th, Thursday.—Registration of matriculated students.

September 30th, Friday.—Instruction begins in all departments of the University at Ithaca. President's annual address to students at 12 M.

December 22d, Thursday.—Christmas recess begins.

January 4th, Wednesday.—Instruction resumed.

January 11th, Monday.—Founder's Day.

February 8, Wednesday.—First term closes.

Second Term.

February 11th, Saturday.—Registration for the second term.

April 5th, Wednesday.—Instruction ends.

April 11th, Tuesday.—Instruction resumed.

May 27th, Saturday.—Navy Day.

June 14th, Wednesday.—Instruction ends.

June 22d, Thursday.—Forty-third annual Commencement.

General Statement.

From its very foundation Cornell University has offered special courses for students preparing for the study of Medicine; first in the Natural History course, and later also in a special two-year Medical Preparatory course. In 1898 the Medical College was established in New York City with a four years' course. At the same time the work of the first two years was duplicated at the University in Ithaca, since many of the fundamental scientific subjects of

which this part of the course mainly consists were already provided for in the long-established departments of Botany, Zoölogy, Comparative Anatomy, Physics, Chemistry, Physiology, Histology, Embryology and Bacteriology. The courses in these departments were modified where necessary and additional courses were added so as to make the work at Ithaca fully equivalent to the first two years in New York City.

Among the facilities of the University of special value to the Medical College may be mentioned the museums of Vertebrate and Invertebrate Zoölogy, including Entomology and Comparative Anatomy, of Agriculture, of Botany, of Geology, and of Veterinary Medicine. The University Library, with its 365,000 bound volumes, 55,000 pamphlets, and over 2,000 current periodicals and transactions, is as freely open to medical students as to other University students.

Through the generosity of the late Dean Sage, of Albany, the University has been enabled to erect a building especially designed for anatomy, histology, embryology, and physiology. The building is constructed of Ohio sandstone. The general form is that of an E, 157 feet long and 50 feet wide, with wings 40 feet square.

In the cellar are the cold-storage, embalming, and cremating rooms and storerooms, and a large room forty feet square for aquaria, projection, etc.

In the basement are the ventilating and cold-storage machinery, a large lecture room, a recitation room, and an office for the departments of surgery, medicine and obstetrics, besides the lower part of the large amphitheatre.

On the first floor are located the cloak rooms for men and women, college office, library, reading room, faculty room, and private laboratory for histology, general laboratory for experimental physiology, demonstration, and dark room for physiology and the upper part of the large amphitheatre.

On the second floor is the department of histology, with a large general laboratory, a research laboratory, preparation rooms and private laboratories for the instructors. Upon this floor also is located the department of Physiology with a large general laboratory for biochemistry, a research laboratory for biochemistry, a research laboratory for experimental physiology, a metabolism

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room, an incubator room, repair room, and private laboratories for the instructors.

The third floor consists of the general and special dissecting rooms, study rooms, and amphitheatre, besides rooms for the instructors.

The attic is utilized for photography, macerating the skeletons, and for storage.

The air in the building is constantly changed by forced ventilation. The lighting is especially good in all the rooms, as shown by the picture opposite page 79.

DEPARTMENTS, METHODS AND FACILITIES.

ANATOMY.

ABRAM T. KERR, B.S., M.D., *Professor.*

JACOB PARSONS SCHAEFFER, A.M., M.D., *Assistant Professor.*

FLOYD ROBINS WRIGHT, A.B., M.D., *Demonstrator.*

ALBERT CYRUS DURAND, A.B., M.D., *Demonstrator.*

Anatomy is mostly concentrated into the first term. This gives a large amount of continuous time for the subject, which consists mainly of practical work in the laboratory. Each student is independent of the others, and those with special training or ability are encouraged to do more than the required work. Personal quizzes and demonstrations are given upon each stage of the work. In addition to this, there are frequent recitations and demonstrations to small sections of the class. The students are encouraged to make careful notes and drawings of the conditions which they find in their specimens. To facilitate the drawings, outline record charts are furnished. Clay also is provided for modelling bones and other parts. The department is well equipped with models and special preparations. These are for use in the demonstrations and also for the personal use of students in the laboratory. There is plenty of dissecting material, which is embalmed and kept in cold storage so as to be ready for use when needed.

The work is distributed as follows: In the first term twenty-two hours per week are given to Anatomy. A complete disarticulate skeleton is loaned to each student. The vertebræ and ribs and the bones of the upper extremity are studied first, and when these are finished the dissection of the upper extremity is begun. The study of the first part completed, the bones and then the soft parts of the head, except the brain, are considered. The thorax and the thoracic viscera are next dissected and studied topographically and systematically. In correlation with the work in histology and physiology, an elementary course of demonstrations on the gross anatomy of the viscera is given.

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In the second term the students attend demonstrations and recitations in which the work of the preceding term is reviewed, and an attempt is made to locate the position and relation of structures studied upon the live body. The gross anatomy of the central nervous system is studied in the laboratory.

Those who satisfactorily complete the required work and others properly qualified may do advanced work.

1. Anatomy.—Laboratory work with section demonstrations and recitations. Twenty-two actual hours weekly. First term: (a) The upper extremity, 3 credits; (b) the head and neck, 4 credits; (c) the thorax, 2 credits. Course 1 is required of first year medical students. Drs. Kerr and Schaeffer.

2. Anatomy.—Laboratory work with section demonstrations and recitations. Fifteen actual hours weekly. First term: (a) Abdominal and pelvic walls and viscera, $4\frac{1}{2}$ credits; (b) thoracic walls and viscera, $1\frac{1}{2}$ credits. Course 2 may be elected by those properly qualified. Drs. Kerr and Schaeffer.

4. Thoracic and Abdominal Viscera.—Section demonstrations. Two hours weekly. Required of first year students in Medicine. First term: Credit 1 hour. Dr. Kerr.

5. Central Nervous System, Gross Anatomy.—Credit 2 hours. Laboratory work 2 hours a week, with occasional demonstrations. Dr. Kerr.

6. Advanced and Research Work.—Laboratory work. Elective. Eight or more actual hours per week. Drs. Kerr and Schaeffer.

7. Anatomy of the Live Body.—Upper extremity, head and neck, and lower extremity. Two hours weekly, second term of the first year. Credit 1 hour. Required of first year medical students. Dr. Schaeffer.

8. Anatomy of the Live Body, Thorax and Abdomen.—First term. Hours to be arranged. Elective. Dr. Schaeffer.

HISTOLOGY AND EMBRYOLOGY.

B. F. KINGSBURY, Ph.D., M.D., *Professor.*

WILLIAM A. HILTON, Ph.D., *Instructor.*

JAMES A. BADERTSCHER, A.M., *Assistant.*

PHILIP E. SMITH, B.S., *Assistant.*

As indicated by the following courses, this department offers elementary and advanced instruction in the theory and use of the microscope and its accessories, in photo-micrography, in vertebrate histology, and vertebrate embryology; and opportunities for research in all of these subjects.

The material equipment consists of a good supply of modern microscopes, while camera-lucas, polariscopes, micro-spectroscopes, photo-micrographic cameras, microtomes and other special apparatus are in sufficient numbers to give each student opportunity for personally learning to use them, and for applying them to any special study in which they are called for. Two projection microscopes are available for class demonstrations and for making the drawings used in reconstruction. The collection of histologic and embryologic specimens is extensive and constantly increasing.

The rooms for the use of the department are on the second floor of Stimson Hall. They are almost perfectly lighted and consist of a large general laboratory, an advanced laboratory, a preparation room, department office, and five private laboratories for the instructing staff, where also special demonstrations of difficult subjects are given to small groups of students.

The aim of the department is to bring the student into direct contact with the truths of nature, and hence, while there are demonstration lectures and conferences to give broad and general views, there is relatively a large amount of laboratory work in which the facts are learned at first hand, and the methods and manipulations necessary for acquiring the facts are practiced by each student. This lake region with its rich and varied fauna is especially favorable for investigation in the histology and embryology of all the main groups of vertebrates; and the proximity of the abattoirs in the city makes it possible to obtain material for the study of the development of the sheep, cow, and pig. The clinic and veterinary department supply material for the embryology of the cat and dog,

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so that the opportunities for research upon the development of animals are excellent. The collection of material and microscopic series of human embryology, contributed mainly by graduates of the college, is steadily growing. Every encouragement is given for the fullest utilization of these opportunities.

The work required of students of medicine is given in two courses, 10 and 5. For those who have already had elsewhere satisfactory work in histology, elective work may be taken in Courses 3, 7, and 8. Courses open to students in the Colleges of Arts and Sciences and Veterinary Medicine are given in the University Register.

COURSES REQUIRED OF STUDENTS OF MEDICINE.

10. Histology. First term. Credit, 5 University hours. Required of first year student of medicine. Three laboratory periods and two lectures each week. The work includes: (a) The histology of the tissues and organs (except the nervous system and organs of sense); (b) the main facts of histogenesis and the development of the organs (except nervous system and sense organs). Since the development of the body is not taken up in detail, it is highly advantageous that it be preceded by a course in embryology (see University Register; course 4). Professor Kingsbury and Dr. Hilton.

5. The Nervous System and Organs of Sense.—Histology and Development. Second term. Credit, 2 University hours. Two laboratory periods with laboratory conferences and quizzes. The microscopic structure and development of the nervous system and organs of sense are systematically studied. Professor Kingsbury and Dr. Hilton.

ADVANCED AND ELECTIVE COURSES.

3. Special Histology and Technique. First term. One recitation, demonstration, or lecture, T. 8. Two laboratory periods by assignment. Credit, 3 hours.

In this course a more detailed knowledge of histology and facility in technique is gained by practical work in one or more of the fields of histology or embryology. Designed for those who desire

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a better working knowledge of histology for use in Biology or Medicine. Professor Kingsbury and Instructor Hilton.

7. Advanced Work in Histology and Embryology. First and second terms. Laboratory work, eight or more actual hours per week, with Seminar (course 8).

This course is designed for those preparing theses for baccalaureate or advanced degrees, and for those wishing to undertake special investigations in histology and embryology. Professor Kingsbury and Instructor Hilton.

Course 7 is open to those who have had courses 10 and 3, or their equivalents. A good reading knowledge of French and German is indispensable for the most successful work in this course. It is suggested that those who intend to take this course confer with the head of the Department as early as possible, so that the work may be planned to the best advantage.

8. Seminar.—First and second terms. One hour each week at an hour to be arranged.

For the discussion of current literature and the presentation of original work by the members of the Department staff and those doing advanced work in the Department. It may be taken in connection with course 3 or course 7.

DEPARTMENT OF PHYSIOLOGY AND BIOCHEMISTRY.

SUTHERLAND SIMPSON, M.D., D.Sc., *Professor of Physiology.*

ANDREW HUNTER, M.A., B.Sc., M.B., Ch.B., *Assistant Professor of Biochemistry.*

MELVIN DRESBACH, M.S., M.D., *Assistant Professor of Physiology.*

HENRY W. MAYES, B.S., *Instructor in Physiology.*

MAURICE H. GIVENS, Ph.B., *Instructor in Biochemistry.*

Physiology.

This subject is taught in the first and second terms of the first year, and the work is carried on by means of lectures, recitations, demonstrations, and practical laboratory instruction. In the laboratory the student is made to carry out for himself experiments which demonstrate the fundamental facts of the science, and he is

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taught to draw conclusions from these facts. Special attention is given to experimental methods which are likely to be of importance in the study of clinical medicine.

The following courses are offered:

1. Physiology of the Cell, Muscle, Nerve, Heart and Circulation, Blood and Lymph, and Respiration. First term. Three lectures or recitations weekly with demonstrations, where necessary. At frequent intervals written and oral examinations will be held. Credit 3 hours. Professor Simpson and assistants.

2. Physiology of Digestion, Excretion, Internal Secretion, Animal Heat, and Reproduction.—Second term. Three lectures or recitations weekly with demonstrations and examinations as in course 1. The latter part of this course will be taken up with a review of the whole subject. Credit 3 hours. Professor Simpson.

4. Experimental Physiology.—Second term. Four three-hourly laboratory periods per week. In this course the physiology of the cell, muscle, nerve, heart and circulation, blood, respiration, alimentary system including liver and pancreas, internal secretion, body temperature and animal heat, nervous system and special senses will be studied practically by each student individually under the direct superintendence of the professor and assistants. The course will be supplemented by one demonstration per week. Practical examinations will be held from time to time, and the student's knowledge of the work tested orally at each meeting. Credit 5 hours. Professor Simpson and assistants.

5. Physiology of the Nervous System and Special Senses.—Second term. This is given as a special course of lectures, two per week, throughout the whole term, after the student has studied the anatomy of the brain and spinal cord, and special sense organs. Credit 2 hours. Professor Simpson.

7. Seminar.—First and Second Terms. A seminar is held in association with Biochemistry at which current literature is discussed, and the results of original investigations carried on by workers in the laboratories are presented for criticism. Students are invited to attend these meetings and to take part in the discussions. Credit, 1 hour.

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8. Advanced Work and Research.—The laboratory is open daily from 8 A. M. till 6 P. M. for advanced work and original investigation under the direction of the professor and assistants.

Biochemistry.

In this section the student is taught the chemistry of the tissues, fluids, secretions, and excretions of the human body; the composition of the foods, and the phenomena of their digestion, absorption, and assimilation; the rôle of enzymes in the animal economy; the principles of nutrition; and the leading facts of special and general metabolism.

The Application of Chemistry to Clinical Medicine.—Instruction is given in the use of analytical methods for the examination of normal and pathological fluids and tissues, special attention being devoted to the quantitative analysis of the gastric contents, milk, and urine.

1. General Biochemistry.—Second term. Three lectures or recitations, and nine actual hours' laboratory work per week; supplemented by demonstrations, conferences, and written reviews. Required of first year students of Medicine. Credit, 6 hours. Assistant Professor Hunter and Instructor Givens.

6. Advanced Biochemistry and Research.—The laboratory is open daily to all qualified persons for advanced instruction or the prosecution of research. Daily throughout the year from 8 to 6. Assistant Professor Hunter.

CHEMISTRY.

WILLIAM RIDGELY ORNDORFF, A.B., Ph.D.,

Professor of Organic Chemistry.

EDSON HOYT NICHOLS, A.B.,

Instructor in Chemistry.

SIDNEY WINTERS SHATTUCK, A.B.,

Assistant in Chemistry.

Organic Chemistry, or the Chemistry of the Compounds of Carbon.—In this course the study of the typical compounds of carbon, their properties, reactions, and relations to one another, is taken

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up, especial attention being given to those organic substances that are of physiological importance. The course consists of lectures, recitations supplemented by frequent written examinations, and laboratory work. The lectures are fully illustrated by experiments, specimens of the compounds considered, and charts.

32. Elementary Organic Chemistry.—Three lectures, recitations, or written reviews, and three hours' laboratory work weekly. First half year. Credit 4 hours. Mr. Nichols and Mr. Shattuck.

SCHEDULE AND SUMMARIZED STATEMENT.

In this schedule the Counts or University hours are given on the following basis: One recitation or lecture weekly for one term or half year gives a credit of one; for laboratory work it requires two and one-half actual hours weekly for a term or half a year to secure a credit of one.

SCHEDULE OF REQUIRED COURSES.

First Term.

	<i>No. of Course.</i>	<i>Hours of Credit.</i>	<i>Actual Hours per Week.</i>
Anatomy	1 and 4	9	22
Physiology	1	3	3
Organic Chemistry	32	4	6
Histology	10	5	11
		—	—
		21	42

Second Term.

Histology	5	2	5
Physiology	2	3	3
Physiology	4	5	13
Physiology	5	2	2
Biochemistry	1	6	12
Anatomy	5	2	5
Anatomy	7	1	2
		—	—
		21	42

SUMMARY OF REQUIRED COURSES.

First Term.

1 and 4. Anatomy.—Laboratory work with section demonstrations and recitations. Twenty-two actual hours weekly. First term. (a) The upper extremity, 3 credits; (b) the head and neck, 4 credits; (c) thorax, 2 credits. Drs. Kerr, Schaeffer, Wright and Durand.

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1. Physiology of the Cell, Muscle, Nerve, Heart and Circulation, Blood and Lymph, and Respiration.—Three lectures, demonstrations or recitations weekly. Credit 3 hours. Professor Simpson and assistants.

32. Elementary Organic Chemistry.—Three hours, lectures, recitations, or written reviews, and three hours' laboratory work weekly. Credit 4 hours. Mr. Nichols and Mr. Shattuck.

10. Histology.—Three laboratory periods and two lectures each week. Credit 5 hours. Professor Kingsbury and Dr. Hilton.

Second Term.

5. The Nervous System and Organs of Sense.—Histology and Development. Two laboratory periods with laboratory conferences and quizzes. Credit 2 hours. Professor Kingsbury and Dr. Hilton.

2. Physiology of Respiration, Digestion, Excretion, Internal Secretion, Animal Heat, and Reproduction.—The latter part of the course will be taken up with a review of the whole subject. Three lectures or recitations weekly, with demonstrations and examinations. Credit 3 hours. Professor Simpson.

4. Experimental Physiology.—Three three-hour laboratory periods per week. This course will be supplemented by one demonstration per week. Credit 5 hours. Professor Simpson and assistants.

5. Physiology of the Nervous System and Special Senses.—Two lectures per week. Credit 2 hours. Professor Simpson.

1. General Biochemistry.—Three lectures or recitations and nine actual hours' laboratory work per week. Credit 6 hours. Assistant Professor Hunter and Mr. Givens.

5. Central Nervous System Gross Anatomy.—Laboratory work five hours a week with occasional demonstrations. Credit 2 hours. Dr. Kerr.

7. Anatomy of the Live Body.—Upper extremity, head and neck, and lower extremity. Two hours weekly. Credit 1 hour. Dr. Schaeffer.

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REQUIREMENTS FOR ADMISSION.

The requirements for admission are identical with those of the college at New York City (see page 21).

THE COMBINED A.B. AND M.D. DEGREES.

It will be seen from Section II of the requirements for admission that the two degrees, Bachelor of Arts and Doctor of Medicine, may be obtained in seven years. The first three years must be taken in the College of Arts and Sciences. The fourth year is the first year in the Medical College, and at the end of it the student receives the degree of A.B. The last three years are also taken entirely in the College of Medicine at New York City. In the first and second years of the course in Arts and Sciences certain subjects are prescribed, and the rest are elective as appears from the following rule:

Before a student may be registered as a Junior he must have completed sixty hours of work, which shall include in English and History six hours, in one or more languages other than English six hours, in Philosophy and Mathematics six hours, and in Physics, and Chemistry, Geology, Physical Geography, and the biologic sciences six hours, of which hours the student is required to take at least twelve, and advised to take more, in his freshman year. Each six hours may be entirely in one division (for example, Philosophy six hours), or partly in one and partly in another (for example, Philosophy three hours and Mathematics three hours).

For admission to the Medical College Physics, Chemistry and Biology are prescribed.

The requirements specified in the two preceding paragraphs are met in the following curriculum:

	FIRST YEAR ARTS.	Course.	1st Term.	2d Term.
English or History.....	—		3	3
*Foreign Language	—		3	3
Biology	1		3	3
‡Mathematics or Philosophy.....	—		3	3
Physics Lectures	1		4	—
§Physics Recitations	5		—	2
Physics Laboratory	10		—	2
			16	16

*Students should have a reading knowledge of French and German.

‡Those who have Solid Geometry and Trigonometry should elect Philosophy.

§In place of course 5 students may elect two additional hours in course 10, but should notify the professor in charge.

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SECOND YEAR ARTS.

	<i>Course.</i>	<i>1st Term.</i>	<i>2d Term.</i>
Chemistry, Inorganic	1	6	—
Chemical Analysis—Qualitative and Quantitative	6	—	5
Histology	1	4	—
Embryology	4	—	3
*Elective	—	8	10
		18	18

The rest of the work in the second year and the entire third year is elective. In regard to the elective work the secretary of the Medical College will be glad to confer with students in Arts and Sciences, who later expect to enter the Medical College.

RESIDENCE AND REGISTRATION.

The college year is nine months long, extending from the last of September till about the middle of June, and is divided into two nearly equal terms. (For exact dates, see calendar on page 80.)

No credit is given for work done in absentia. For leave of absence during the session, application should be made to the Secretary.

At the beginning of the term (September 27 and 28, 1910, and February 11, 1911) students must register with the University Registrar, in Morrill Hall. After registration with the University Registrar, they must register with the Secretary of the Medical College, in Stimson Hall.

EXAMINATIONS.

Students are advanced in course from one year to the next upon passing examinations upon the work of that year. The work of each year is considered final of itself. There is no unnecessary repetition of subjects taught from year to year. According to the

*Those who have not a reading knowledge of French and German should elect one or both of these languages. Students who elect Mathematics in their first year should take Philosophy in their second.

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usage of the other colleges, the University student found to be markedly deficient will be dropped from the College at the end of the term in which such deficiency is shown. In the case of a student so dropped, an application for re-admission will not be entertained until after the expiration of one term.

ADVANCEMENT FROM FIRST TO SECOND YEAR.

Upon the completion of the year in Ithaca, the student must obtain from the Faculty a statement of all the work which he has done; and accompanying this statement must be a recommendation that he be allowed to register in the New York division of the Medical College. As a student is not advanced from one year to another in the New York division until all the work of the year is completed, a student from Ithaca cannot enter the second-year class in New York until the entire schedule of the first year has been successfully completed. For removing any conditions, examinations are held at the beginning of the fall term, both in Ithaca and in New York City. The student is at liberty to take these examinations in Ithaca or in New York City. The examination on a subject in either place is final for that year. That is, the student will not be permitted to try an examination on a subject in Ithaca, and take advantage of the later date for the examination in New York to have a second examination on the same subject in the same autumn.

If a student is deficient in two or more subjects there is no objection to his taking the examination in one or more subjects in Ithaca, and the remaining ones in New York, the same autumn.

MEDICAL SOCIETY.

The Cornell Medical Society is a student organization. At the meetings, papers prepared by the members are read, followed by general discussion. The aim is to give mutual aid in gaining general and special medical knowledge, facility in conducting the exercises of the meetings, and in presenting papers and discussions in a clear and forcible manner before an audience.

CORNELL UNIVERSITY MEDICAL COLLEGE.

CHARGES FOR INSTRUCTION.

FIRST YEAR.

Matriculation	\$5.00
Tuition	150.00
Laboratory Fees	35.00
	\$190.00

To secure payment for breakage of instruments, apparatus, etc., each student is required to deposit with the treasurer \$10. This deposit, less the amount charged for breakage, will be returned at the end of the year.

BOARD AND ROOMS.

The cost of living in Ithaca, including board, room, fuel, and lights, varies from \$4 to \$10 per week. By the formation of clubs, students are sometimes able to reduce their expenses to \$3.50 per week for room and board, and occasionally to even less than that amount.

There are no dormitories for men students, and only Sage College and Sage Cottage for women students.

The cost for board, rent of furnished room, fuel and lights, in Sage College and Sage Cottage varies from \$5 to \$6.50 a week. A student occupying alone one of the best rooms pays \$6.50 a week. If two occupy such a room together, the price is \$5.75. Those occupying less desirable rooms, with two in a room, pay \$5 a week each. Both buildings are warmed by steam, lighted by electricity, and, in most cases, the sleeping apartment is separated from the study.

Letters of inquiry in regard to board and rooms at the Sage College and the Cottage should be addressed to Mr. G. F. Foote, Business Manager of Sage College, Ithaca, N. Y.

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*For copies of the University Register and for additional information,
apply to*

REGISTRAR, CORNELL UNIVERSITY,

Ithaca, N. Y.

*The full four-year course of the CORNELL UNIVERSITY MEDICAL COLLEGE is given in the City of New York; the work of the first year is also given at Ithaca, where it may be taken by men students, and where it must be taken by women students. Both men and women students take the last three years of the course in New York City. Special announcements of the Medical College and information of every kind regarding it will be furnished on application to

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